

MRID No. 444577-27

DATA EVALUATION RECORD
S 71-4 -- AVIAN REPRODUCTION TEST1. CHEMICAL: Prohexadione Calcium PC Code No.: 1126002. TEST MATERIAL: Prohexadione-Calcium Purity: 91.1%3. CITATION:Author: R. MunkTitle: Prohexadione-Calcium - 1-Generation Reproduction Study on the Bobwhite Quail (*Colinus virginianus*) by Administration in the DietStudy Completion Date: November 12, 1996Laboratory: BASF Aktiengesellschaft, Ludwigshafen/Rhine, GermanySponsor: BASF Corporation, Agricultural Products, Research Triangle Park, NCLaboratory Report ID: 96/10868MRID No.: 444577-27DP Barcode: D2456314. REVIEWED BY: Max Feken, M.S., Environmental Toxicologist, Golder Associates Inc.Signature:Date: 6/30/98APPROVED BY:Pim Kosalwat, Ph.D., Senior Scientist,
Golder Associates Inc.Signature:

P. Kosalwat

Date: 6/30/985. APPROVED BY:Signature:

Brad Montague

Date: 7/13/986. STUDY PARAMETERS:Scientific Name of Test Organism: *Colinus virginianus*Age of Test Organisms at Test Initiation: about 9 monthsDefinitive Study Duration: 22 weeks7. CONCLUSIONS: This study is scientifically sound but ~~does not~~ meet the guideline requirements for an avian reproduction study using bobwhite quail. When compared to the control, there appeared to be no significant treatment related effects on any of the parameters measured at any concentrations tested (i.e., 100, 500, and 1000 ppm). It is not stated whether the test was conducted with the highest dosage level at or above the maximum field residue level (i.e., the

1.67 lb ai/A = highest application rate on label proposed at this time.

expected concentration on avian food items when treated at recommended label rates).

Results Synopsis

Most sensitive endpoints: None were affected

NOEC: 1000 ppm

LOEC: >1000 ppm

8. ADEQUACY OF THE STUDY:

A. Classification: Supplemental

B. Rationale: None of the parameters were affected at any test concentrations; however, it is not stated whether the test was conducted with the highest dosage level at or above the maximum field residue level (i.e., the expected concentration on avian food items when treated at recommended label rates).

C. Repairability: Yes; if the expected maximum field residue level was 1000 ppm or lower.

9. GUIDELINE DEVIATIONS:

1. Neither the highest test concentration showed any significant effect nor the maximum field residue level was reported.
2. The ambient temperature of the study room was not reported.
3. The schedule for test diet preparation was not reported.

10. SUBMISSION PURPOSE:

11. MATERIALS AND METHODS:

A. Test Organisms

| Guideline Criteria | Reported Information |
|--|--|
| Species A wild waterfowl species, preferably the mallard (<i>Anas platyrhynchos</i>), or an upland game species, preferably the northern bobwhite (<i>Colinus virginianus</i>) | Northern bobwhite (<i>Colinus virginianus</i>) |

| Guideline Criteria | Reported Information |
|---|---|
| Age at beginning of test Birds should be approaching their first breeding season. | About 9 months old; birds were approaching their first breeding season. |
| Supplier All birds should be from the same source. | Obtained from H. und E. Kuberich, Quail Breeding, Geesdorf, Germany |
| Were birds pen-reared? | Not reported |
| Were birds phenotypically indistinguishable from wild birds? | Yes |
| Health observation period 2 to 6 weeks. | About 1 month |
| Were birds healthy and without excessive mortality prior to the test? | Yes |

B. Test System

| Guideline Criteria | Reported Information |
|--|----------------------|
| Were pens for adult birds of adequate size and designed to conform to good husbandry practices? | Yes |
| Were pens for chicks of adequate size and designed to conform to good husbandry practices? | Yes |
| Were pens constructed of a nonbinding material such as galvanized or stainless steel? | Yes |
| Was adequate ventilation provided? | Yes |
| Temperature Approx. 21°C (70°F) | Approx. 21 ±2°C |
| Relative humidity Approx. 55% | Approx. 50 - 60% |

| Guideline Criteria | Reported Information |
|---|---|
| <u>Lighting</u> First 8 weeks: 7 h per day. Thereafter: 16-17 h per day. At least 6 footcandles at bird level. | First 7 weeks: 7 h per day. Week 8-9: 14 h per day Thereafter: 17 h per day. Illumination: 4 - 15 footcandles. |
| <u>Diet</u> A commercial breeder feed (or its equivalent) that is appropriate for the test species. | Adults received quail diet manufactured by "Ssniff" "Department for Test Animal Diets", Soest, Germany. The diet contained: 28% Crude protein 4% Crude fat 3% Calcium 10% Crude ash Chicks received the same commercial feed as the adults minus the test compound. |
| <u>Preparation of test diet</u> A premixed containing the test substance should be mechanically mixed with basal diet. If an evaporative vehicle is used, it must be completely evaporated prior to feeding. | The test material was mixed with basal diet into a premix that was used for preparation of the final diet. |
| Was the premix stored under conditions which maintain stability? | Yes |
| Was the diet analyzed to verify homogeneity and stability of the test substance? | Yes |
| <u>Replenishment of feed</u> | The dates on which test diets were prepared were not reported. Feed and water were provided <i>ad libitum</i> for the adults and offspring. |

C. Test Design

| Guideline Criteria | Reported Information |
|---|--|
| <u>Nominal concentrations</u> At least two concentrations other than the control are required; three or more are strongly recommended. The highest test concentrations should show a significant effect or be at or above the maximum field residue level. | Nominal concentrations: Control, 100, 500, and 1000 ppm, not corrected for purity. Max. field residue level: Not reported. |
| <u>Control</u> Vehicle control. | Negative control |
| <u>Vehicle</u> Corn oil or other appropriate vehicle. | No vehicle was used. |
| <u>Vehicle amount (% of diet by weight)</u> Not more than 2%. | N/A |
| <u>Number of birds per pen</u> One male and 1 female per pen is strongly recommended. For quail, 1 male and 2 females may be acceptable. For ducks, 2 males and 5 females may be acceptable. | 1 male and 1 female per pen |
| <u>Number of pens per group</u> At least 5 replicate pens are required for mallards housed in groups of 7. For other arrangements, at least 12 pens are required, but considerably more may be needed if birds are kept in pairs. | 16 pens per group with 4 additional pens maintained in each group as replacement birds, if necessary, at the end of the pre-egg production period. |
| <u>Pre-laying exposure duration</u> At least 10 weeks prior to the onset of egg-laying. | 10 weeks |
| <u>Exposure duration with egg-laying</u> At least 10 weeks. | 12 weeks |

| Guideline Criteria | Reported Information |
|--|----------------------|
| <u>Withdrawal period</u> If reduced reproduction is evident, a withdrawal period of up to 3 weeks may be added to the test phase. | N/A |

D. Egg Collection and Incubation

| Guideline Criteria | Reported Information |
|--|--|
| <u>Were eggs collected daily?</u> | Yes |
| <u>Egg storage temperature</u> Approximately 16°C (61°F) | 16 ± 2°C |
| <u>Egg storage humidity</u> Approximately 65% | Approximately 65 - 90% |
| <u>Were eggs set weekly?</u> | Yes |
| <u>Were eggs candled for cracks prior to being set for incubation on Day 0?</u> | Yes |
| <u>Candling for fertility</u> Quail: approx. Day 11 Ducks: approx. Day 14 | Eggs were candled on days 11 and 18. |
| <u>Transfer of eggs to hatcher</u> Bobwhite: Day 21 Mallard: Day 23 | Eggs were transferred on Day 22. |
| <u>Hatching temperature</u> 39°C (102°F) is recommended | 37.5 - 38.0°C |
| <u>Hatching humidity</u> 70% is recommended | Approximately 80 - 90% |
| <u>Day after egg set that chicks were removed and counted</u> Bobwhite: Day 24 Mallard: Day 27 | Chicks that had hatched were removed and counted within 24 hours. All remaining unhatched eggs were classified as "dead-in-shell". |

E. Eggshell Thickness Measurement

| Guideline Criteria | Reported Information |
|--|--|
| Collection Schedule At least once every two weeks (Week 1, 3, 5, 7 and 9). | All eggs laid on one day of weeks 1, 3, 5, 7, 9, and 11 (egg production period) in each replicate were removed for eggshell thickness measurement. |
| Were shells opened, washed, and air dry for at least 48 hours before measuring? | Yes; shells air dried for at least 48 hours. |
| Measurement 3-4 measurements per eggs to the nearest 0.01 mm. | 4 measurements to the nearest 0.01 mm. |

12. REPORTED RESULTS:

| Guideline Criteria | Reported Information |
|---|---|
| Quality assurance and GLP compliance statements were included in the report? | The study was conducted in accordance with the GLP-Provisions of the Chemicals ACT ("Bundesgesetzblatt Jahrgang 1994, Teil 1, 29.07.94) and with the OECD Principles of Good Laboratory Practice (Paris, 1981). |
| Did diet analysis verify the concentrations of test material? | Yes |
| Did diet analysis show that the test substance was stable and homogeneous? | Yes |
| Were body weights of adults reported for test initiation and biweekly up to week 8 or the onset of egg laying? | Yes |
| Was average food consumption of adults reported at least biweekly? | Yes |

| Guideline Criteria | Reported Information |
|--|---|
| <p><u>Reproductive Endpoints</u></p> <p>The following endpoints should be reported:</p> <ul style="list-style-type: none"> • Eggs laid • Eggs cracked • Eggs set • Viable embryos • Live 3-week embryos • Normal hatchlings • 14-day-old survivors • Weights of 14-day-old survivors • Egg shell thickness • Total food consumption • Initial and final body weights, by sex | All endpoints listed at left plus egg weight, early embryonic deaths, dead hatchlings in shell, and hatchling weight. |
| Were data reported by pen for all endpoints? | Yes |

Significant Results: There were no treatment related mortalities or overt signs of toxicity at any test concentration (100, 500 and 1000 ppm). When compared to the control, there were no significant differences in adult bodyweight or feed consumption at any concentration. There were no significant treatment related reductions in any of the reproductive parameters measured at any test concentration when compared to the control.

13. VERIFIED STATISTICAL RESULTS:**Means of Endpoints**

| Endpoint | Control | 100 ppm | 500 ppm | 1000 ppm |
|-------------------------------------|---------------|---------------|---------------|---------------|
| Eggs laid (EL) | 40 (21) | 43 (17) | 47 (13) | 40 (17) |
| Eggs cracked (EC) | 0.9 (1.2) | 1.1 (1.2) | 1.1 (1.6) | 0.8 (0.8) |
| Eggs set (ES) | 37 (19) | 39 (16) | 43 (12) | 36 (16) |
| Viable embryos (VE) | 33 (18) | 35 (14) | 34 (13) | 31 (16) |
| Live 3-wk embryos (LE) | 32 (17) | 35 (14) | 33 (13) | 31 (15) |
| Normal hatchlings (NH) | 25 (15) | 25 (12) | 26 (11) | 26 (15) |
| 14-day-old survivors (HS) | 22 (14) | 22 (11) | 23 (11) | 23 (15) |
| Egg shell thickness (THICK) | 0.196 (0.009) | 0.201 (0.010) | 0.204 (0.009) | 0.197 (0.012) |
| Hatchling weight (HATWT) | 6.3 (0.4) | 6.5 (0.5) | 6.3 (0.6) | 6.6 (0.3) |
| 14-day-old survivor weight (SURVWT) | 24.0 (3.8) | 25.3 (2.9) | 24.4 (1.8) | 24.5 (2.6) |
| Mean food consumption (FOOD) | 19.4 (1.9) | 20.0 (1.2) | 20.0 (1.2) | 19.8 (1.0) |
| Final weight of males (POSTM) | 202 (15) | 206 (11) | 203 (12) | 199 (12) |
| Final weight of females (POSTF) | 225 (20) | 229 (9) | 228 (10) | 222 (16) |

Statistically Significant Endpoints: No statistically significant effects were observed.

14. **REVIEWER'S COMMENTS:** When compared to the control, there were no treatment related effects on any of the parameters measured at any concentration tested (i.e., 100, 500, and 1000 ppm). The author noted that highest concentration tested was selected based on the "EPA's contemporarily recommended "upper limit" concentration of 1,000 mg/kg." However, it is unclear if the highest dosage level (1000 ppm) was at or above the maximum expected field residue level. This study will be classified as **Supplemental** pending the registrant's response.

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 PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 10:48 Wednesday, June 24, 1998

| OBS | LEVEL | EL | EC | ES | VE | LE | NH | HS | THICK | HATWT |
|-----|---------|----|----|----|----|----|----|----|-------|-------|
| 1 | CONTROL | 57 | 0 | 53 | 47 | 47 | 40 | 38 | 0.203 | 6.43 |
| 2 | CONTROL | 68 | 0 | 63 | 63 | 60 | 53 | 53 | 0.184 | 7.04 |
| 3 | CONTROL | 5 | 0 | 5 | 0 | 0 | 0 | 0 | | |
| 4 | CONTROL | 24 | 0 | 23 | 22 | 22 | 21 | 21 | 0.200 | 6.80 |
| 5 | CONTROL | 7 | 1 | 6 | 3 | 3 | 2 | 1 | | 6.00 |
| 6 | CONTROL | 57 | 0 | 54 | 52 | 52 | 45 | 38 | 0.203 | 6.66 |
| 7 | CONTROL | 46 | 4 | 41 | 32 | 32 | 23 | 21 | 0.190 | 6.27 |
| 8 | CONTROL | 30 | 1 | 26 | 26 | 26 | 25 | 22 | 0.177 | 5.84 |
| 9 | CONTROL | 46 | 0 | 46 | 37 | 37 | 26 | 19 | | 6.34 |
| 10 | CONTROL | 71 | 1 | 65 | 55 | 53 | 38 | 33 | 0.198 | 6.34 |
| 11 | CONTROL | 48 | 1 | 46 | 40 | 40 | 24 | 19 | 0.200 | 5.92 |
| 12 | CONTROL | 33 | 2 | 29 | 28 | 28 | 24 | 22 | 0.200 | 6.23 |
| 13 | CONTROL | 64 | 3 | 57 | 40 | 39 | 15 | 13 | 0.203 | 6.28 |
| 14 | CONTROL | 42 | 0 | 38 | 38 | 38 | 35 | 32 | 0.200 | 6.17 |
| 15 | CONTROL | 31 | 0 | 28 | 28 | 28 | 22 | 20 | 0.203 | 6.93 |
| 16 | CONTROL | 17 | 2 | 13 | 12 | 12 | 8 | 4 | 0.185 | 5.73 |
| 17 | TRT1 | 47 | 0 | 45 | 36 | 34 | 27 | 21 | 0.190 | 6.69 |
| 18 | TRT1 | 63 | 3 | 56 | 56 | 55 | 40 | 38 | 0.195 | 6.51 |
| 19 | TRT1 | 28 | 1 | 24 | 19 | 19 | 12 | 11 | 0.207 | 6.91 |
| 20 | TRT1 | 57 | 1 | 51 | 50 | 50 | 44 | 39 | 0.204 | 6.99 |
| 21 | TRT1 | 53 | 3 | 48 | 41 | 41 | 25 | 23 | 0.200 | 5.88 |
| 22 | TRT1 | 52 | 2 | 46 | 37 | 37 | 35 | 35 | 0.195 | 6.87 |
| 23 | TRT1 | 60 | 1 | 56 | 46 | 46 | 35 | 28 | 0.203 | 6.25 |
| 24 | TRT1 | 57 | 0 | 54 | 41 | 41 | 25 | 23 | 0.180 | 6.75 |
| 25 | TRT1 | 21 | 0 | 21 | 21 | 21 | 19 | 18 | | 7.01 |
| 26 | TRT1 | 40 | 0 | 39 | 39 | 39 | 38 | 38 | 0.200 | 6.65 |
| 27 | TRT1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | | |
| 28 | TRT1 | 26 | 0 | 24 | 22 | 22 | 21 | 20 | 0.210 | 6.59 |
| 29 | TRT1 | 33 | 1 | 31 | 28 | 27 | 21 | 20 | 0.210 | 6.06 |
| 30 | TRT1 | 53 | 0 | 51 | 46 | 45 | 14 | 9 | 0.210 | 5.60 |

| OBS | SURVWT | FOOD | PREM | POSTM | PREF | POSTF |
|-----|--------|------|-------|-------|-------|-------|
| 1 | 26.7 | 19.5 | 182.5 | 181.8 | 175.8 | 218.2 |
| 2 | 30.9 | 19.8 | 202.9 | 212.0 | 187.6 | 237.7 |
| 3 | | 19.9 | 185.6 | 193.4 | 190.1 | 231.3 |
| 4 | 25.1 | 16.5 | 189.5 | 182.2 | 186.8 | 214.3 |
| 5 | 14.5 | 17.1 | 202.4 | 192.7 | 192.2 | 202.7 |
| 6 | 24.3 | 23.8 | 181.5 | 214.3 | 195.6 | 230.5 |
| 7 | 23.9 | 19.4 | 214.6 | 205.2 | 207.1 | 242.9 |
| 8 | 26.4 | 17.8 | 195.9 | 206.2 | 184.0 | 209.7 |
| 9 | 24.4 | 21.5 | 209.1 | 219.8 | 203.9 | 258.3 |
| 10 | 24.4 | 22.2 | 204.3 | 215.3 | 199.7 | 245.3 |
| 11 | 20.5 | 19.6 | 219.9 | 230.0 | 210.0 | 240.4 |
| 12 | 27.1 | 18.7 | 196.0 | 193.9 | 192.5 | 185.3 |
| 13 | 23.0 | 19.7 | 195.3 | 199.6 | 192.1 | 246.0 |
| 14 | 22.9 | 17.7 | 182.0 | 181.8 | 186.2 | 231.0 |
| 15 | 26.0 | 19.1 | 189.5 | 214.8 | 183.0 | 204.6 |
| 16 | 19.5 | 17.4 | 186.5 | 195.8 | 177.8 | 205.7 |
| 17 | 24.8 | 19.5 | 190.7 | 192.2 | 185.4 | 218.8 |
| 18 | 26.1 | 20.1 | 195.9 | 230.4 | 197.9 | 233.5 |
| 19 | 31.6 | 21.5 | 203.6 | 209.8 | 198.2 | 226.6 |
| 20 | 29.8 | 19.4 | 187.6 | 193.0 | 184.3 | 219.6 |
| 21 | | 20.5 | 20.9 | 207.2 | 194.5 | 203.4 |
| 22 | 26.0 | 19.7 | 207.6 | 214.0 | 196.3 | 230.4 |
| 23 | 26.5 | 19.4 | 223.0 | 215.2 | 211.4 | 255.4 |
| 24 | 26.1 | 19.2 | 193.9 | 200.9 | 197.8 | 232.4 |
| 25 | 25.0 | 20.0 | 207.3 | 206.4 | 201.9 | 231.2 |
| 26 | 26.7 | 18.0 | 200.2 | 213.1 | 198.3 | 235.5 |
| 27 | | 17.9 | 209.9 | 215.4 | 206.0 | 220.8 |
| 28 | 26.1 | 21.2 | 188.3 | 193.7 | 186.8 | 221.8 |
| 29 | 22.5 | 22.4 | 194.4 | 203.3 | 176.6 | 220.1 |
| 30 | 23.2 | 20.5 | 194.6 | 200.0 | 188.2 | 221.9 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

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| OBS | LEVEL | EL | EC | ES | VE | LE | NH | HS | THICK | HATWT |
|-----|-------|----|----|----|----|----|----|----|-------|-------|
| 31 | TRT1 | 53 | 3 | 47 | 40 | 40 | 24 | 20 | 0.213 | 6.22 |
| 32 | TRT1 | 41 | 2 | 37 | 35 | 35 | 16 | 10 | 0.190 | 5.80 |
| 33 | TRT2 | 49 | 1 | 44 | 29 | 28 | 25 | 25 | 0.195 | 6.66 |
| 34 | TRT2 | 29 | 0 | 28 | 25 | 25 | 15 | 13 | 0.200 | 6.61 |
| 35 | TRT2 | 55 | 1 | 50 | 49 | 49 | 39 | 30 | 0.203 | 5.90 |
| 36 | TRT2 | 53 | 0 | 52 | 25 | 24 | 19 | 16 | 0.200 | 7.16 |
| 37 | TRT2 | 57 | 0 | 53 | 39 | 38 | 31 | 30 | 0.218 | 6.03 |
| 38 | TRT2 | 55 | 1 | 50 | 30 | 30 | 19 | 17 | 0.195 | 6.19 |
| 39 | TRT2 | 48 | 1 | 45 | 26 | 25 | 12 | 12 | 0.205 | 6.45 |
| 40 | TRT2 | 54 | 0 | 50 | 48 | 48 | 38 | 33 | 0.223 | 6.15 |
| 41 | TRT2 | 59 | 6 | 48 | 43 | 43 | 36 | 31 | 0.200 | 6.56 |
| 42 | TRT2 | 53 | 1 | 49 | 43 | 43 | 29 | 24 | 0.213 | 6.93 |
| 43 | TRT2 | 48 | 0 | 45 | 27 | 27 | 21 | 20 | 0.207 | 6.54 |
| 44 | TRT2 | 36 | 1 | 33 | 17 | 17 | 16 | 16 | 0.200 | 6.04 |
| 45 | TRT2 | 9 | 1 | 7 | 6 | 6 | 5 | 0 | 0.190 | 5.18 |
| 46 | TRT2 | 40 | 4 | 33 | 31 | 31 | 29 | 29 | 0.203 | 7.41 |
| 47 | TRT2 | 59 | 0 | 55 | 54 | 53 | 49 | 45 | 0.203 | 6.21 |
| 48 | TRT2 | 52 | 1 | 48 | 48 | 48 | 30 | 22 | 0.210 | 5.57 |
| 49 | TRT3 | 26 | 2 | 23 | 21 | 21 | 19 | 17 | 0.190 | 6.53 |
| 50 | TRT3 | 31 | 0 | 29 | 27 | 27 | 24 | 20 | 0.205 | 6.94 |
| 51 | TRT3 | 24 | 1 | 21 | 19 | 19 | 14 | 12 | 0.190 | 6.59 |
| 52 | TRT3 | 57 | 0 | 53 | 48 | 48 | 46 | 43 | 0.200 | 6.75 |
| 53 | TRT3 | 59 | 1 | 56 | 52 | 52 | 42 | 41 | 0.190 | 6.82 |
| 54 | TRT3 | 41 | 0 | 37 | 27 | 27 | 19 | 10 | 0.195 | 6.09 |
| 55 | TRT3 | 28 | 1 | 25 | 24 | 24 | 20 | 12 | 0.195 | 5.75 |
| 56 | TRT3 | 70 | 2 | 62 | 59 | 59 | 54 | 52 | 0.190 | 7.08 |
| 57 | TRT3 | 49 | 1 | 45 | 28 | 28 | 12 | 10 | 0.193 | 6.78 |
| 58 | TRT3 | 32 | 0 | 31 | 22 | 22 | 20 | 18 | 0.210 | 6.70 |
| 59 | TRT3 | 36 | 0 | 34 | 34 | 34 | 33 | 25 | 0.190 | 6.46 |
| 60 | TRT3 | 31 | 1 | 29 | 23 | 23 | 23 | 18 | 0.210 | 6.34 |

| OBS | SURVWT | FOOD | PREM | POSTM | PREF | POSTF |
|-----|--------|------|-------|-------|-------|-------|
| 31 | 22.3 | 19.4 | 197.8 | 213.9 | 186.3 | 227.5 |
| 32 | 23.1 | 20.8 | 183.6 | 202.3 | 189.4 | 232.7 |
| 33 | 25.1 | 19.6 | 197.1 | 201.1 | 196.1 | 225.7 |
| 34 | 25.2 | 20.8 | 196.1 | 231.1 | 187.2 | 228.8 |
| 35 | 20.8 | 17.6 | 183.1 | 180.4 | 180.0 | 216.3 |
| 36 | 25.5 | 19.3 | 198.0 | 192.4 | 188.1 | 227.2 |
| 37 | 23.6 | 19.7 | 201.0 | 202.5 | 195.3 | 242.8 |
| 38 | 26.1 | 21.3 | 197.7 | 213.0 | 205.9 | 220.9 |
| 39 | 24.2 | 19.9 | 222.4 | 212.2 | 202.0 | 231.0 |
| 40 | 23.4 | 18.6 | 192.3 | 187.1 | 194.3 | 228.6 |
| 41 | 23.4 | 19.2 | 200.3 | 211.2 | 201.3 | 246.7 |
| 42 | 24.0 | 19.8 | 206.4 | 202.0 | 192.1 | 231.2 |
| 43 | 26.4 | 21.7 | 209.9 | 206.5 | 201.7 | 243.2 |
| 44 | 26.2 | 19.4 | 189.6 | 197.6 | 194.9 | 226.1 |
| 45 | 22.4 | 19.4 | 194.9 | 210.9 | 190.2 | 230.1 |
| 46 | 27.5 | 19.2 | 196.3 | 211.7 | 192.5 | 215.8 |
| 47 | 22.7 | 20.0 | 186.6 | 201.0 | 187.1 | 212.8 |
| 48 | 22.6 | 20.7 | 181.5 | 190.1 | 186.6 | 225.0 |
| 49 | 26.7 | 20.6 | 192.7 | 187.8 | 186.5 | 203.2 |
| 50 | 25.5 | 19.6 | 204.5 | 197.7 | 197.8 | 227.2 |
| 51 | 23.3 | 18.8 | 204.7 | 205.1 | 198.4 | 239.3 |
| 52 | 26.1 | 20.1 | 182.9 | 183.4 | 186.2 | 227.2 |
| 53 | 22.2 | 18.5 | 183.9 | 186.1 | 184.1 | 223.5 |
| 54 | 20.8 | 21.6 | 199.9 | 216.4 | 185.7 | 231.4 |
| 55 | 27.1 | 21.6 | 208.8 | 206.5 | 198.4 | 216.3 |
| 56 | 28.4 | 18.8 | 205.8 | 208.5 | 196.4 | 235.4 |
| 57 | 23.1 | 19.7 | 224.8 | 218.8 | 209.9 | 237.0 |
| 58 | 25.5 | 18.6 | 191.1 | 189.6 | 190.1 | 208.9 |
| 59 | 21.5 | 18.5 | 201.5 | 206.5 | 195.9 | 191.7 |
| 60 | 22.7 | 21.0 | 198.3 | 185.2 | 189.3 | 228.1 |

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| OBS | LEVEL | EL | EC | ES | VE | LE | NH | HS | THICK | HATWT |
|-----|--------|------|-------|-------|-------|-------|----|----|-------|-------|
| 61 | TRT3 | 53 | 2 | 48 | 44 | 43 | 39 | 38 | 0.183 | 6.78 |
| 62 | TRT3 | 57 | 1 | 52 | 50 | 49 | 42 | 37 | 0.185 | 6.69 |
| 63 | TRT3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.230 | 6.44 |
| 64 | TRT3 | 39 | 1 | 37 | 19 | 18 | 16 | 15 | 0.230 | 6.44 |
| OBS | SURVWT | FOOD | PREM | POSTM | PREF | POSTF | | | | |
| 61 | 26.1 | 20.0 | 209.6 | 206.5 | 204.8 | 243.9 | | | | |
| 62 | 27.4 | 20.3 | 197.0 | 192.6 | 189.0 | 226.0 | | | | |
| 63 | | 19.3 | 186.2 | 187.8 | 187.3 | 206.6 | | | | |
| 64 | 20.6 | 19.6 | 180.8 | 207.8 | 176.5 | 198.4 | | | | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

10:48 Wednesday, June 24, 1998

LEVEL

CONTROL TRT1 TRT2 TRT3

MEAN MEAN MEAN MEAN

| | | | | |
|----------------|--------|--------|--------|--------|
| EL | 40.38 | 42.81 | 47.25 | 39.56 |
| EC | 0.94 | 1.06 | 1.13 | 0.81 |
| ES | 37.06 | 39.44 | 43.13 | 36.38 |
| VE | 32.69 | 34.81 | 33.75 | 31.06 |
| LE | 32.31 | 34.50 | 33.44 | 30.88 |
| NH | 25.06 | 24.75 | 25.81 | 26.44 |
| HS | 22.25 | 22.06 | 22.69 | 23.00 |
| ES/EL (%) | 91.21 | 92.86 | 90.66 | 91.93 |
| (EL-EC)/EL (%) | 96.73 | 97.82 | 97.15 | 97.78 |
| VE/ES (%) | 82.48 | 83.31 | 78.46 | 84.94 |
| LE/VE (%) | 99.27 | 99.13 | 99.02 | 99.36 |
| NH/EL (%) | 58.38 | 56.14 | 54.16 | 66.45 |
| NH/ES (%) | 64.27 | 60.60 | 60.27 | 72.34 |
| NH/LE (%) | 76.91 | 72.93 | 77.19 | 84.73 |
| HS/ES (%) | 55.53 | 54.48 | 49.96 | 61.33 |
| HS/NH (%) | 83.90 | 87.49 | 84.39 | 84.35 |
| THICK | 0.20 | 0.20 | 0.20 | 0.20 |
| HATWT | 6.33 | 6.45 | 6.35 | 6.58 |
| SURVWT | 23.97 | 25.35 | 24.45 | 24.47 |
| FOOD | 19.36 | 19.99 | 19.95 | 19.79 |
| POSTM | 202.43 | 206.13 | 203.18 | 199.14 |
| POSTF | 225.24 | 229.16 | 228.26 | 221.51 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

10:48 Wednesday, June 24, 1998

LEVEL=CONTROL

| Variable | Label | N | Mean | Std Dev | CV |
|----------------|-------|----|---------|---------|---------|
| EL | | 16 | 40.375 | 20.601 | 51.023 |
| EC | | 16 | 0.938 | 1.237 | 131.903 |
| ES | | 16 | 37.063 | 19.334 | 52.165 |
| VE | | 16 | 32.688 | 17.757 | 54.322 |
| LE | | 16 | 32.313 | 17.235 | 53.337 |
| NH | | 16 | 25.063 | 14.726 | 58.758 |
| HS | | 16 | 22.250 | 14.252 | 64.056 |
| THICK | | 13 | 0.196 | 0.009 | 4.485 |
| HATWT | | 15 | 6.332 | 0.389 | 6.150 |
| SURVWT | | 15 | 23.973 | 3.788 | 15.799 |
| FOOD | | 16 | 19.356 | 1.930 | 9.970 |
| PREM | | 16 | 196.094 | 11.883 | 6.060 |
| POSTM | | 16 | 202.425 | 14.597 | 7.211 |
| PREF | | 16 | 191.525 | 9.850 | 5.143 |
| POSTF | | 16 | 225.244 | 20.071 | 8.911 |
| ES/EL (%) | | 16 | 91.207 | 5.799 | 6.359 |
| NH/EL (%) | | 16 | 58.377 | 24.787 | 42.460 |
| (EL-EC)/EL (%) | | 16 | 96.730 | 4.642 | 4.798 |
| VE/ES (%) | | 16 | 82.482 | 25.798 | 31.277 |
| NH/ES (%) | | 16 | 64.267 | 26.826 | 41.741 |
| HS/ES (%) | | 16 | 55.529 | 27.854 | 50.162 |
| LE/VE (%) | | 15 | 99.273 | 1.564 | 1.575 |
| NH/LE (%) | | 15 | 76.908 | 15.553 | 20.223 |
| HS/NH (%) | | 15 | 83.900 | 15.432 | 18.393 |

LEVEL=TRT1

| Variable | Label | N | Mean | Std Dev | CV |
|----------------|-------|----|---------|---------|---------|
| EL | | 16 | 42.813 | 17.034 | 39.788 |
| EC | | 16 | 1.063 | 1.181 | 111.196 |
| ES | | 16 | 39.438 | 15.500 | 39.304 |
| VE | | 16 | 34.813 | 13.953 | 40.081 |
| LE | | 16 | 34.500 | 13.832 | 40.094 |
| NH | | 16 | 24.750 | 11.613 | 46.922 |
| HS | | 16 | 22.063 | 11.416 | 51.745 |
| THICK | | 14 | 0.201 | 0.010 | 4.771 |
| HATWT | | 15 | 6.452 | 0.457 | 7.077 |
| SURVWT | | 15 | 25.353 | 2.868 | 11.313 |
| FOOD | | 16 | 19.994 | 1.201 | 6.006 |
| PREM | | 16 | 199.100 | 10.183 | 5.115 |
| POSTM | | 16 | 206.131 | 10.600 | 5.142 |
| PREF | | 16 | 194.263 | 9.325 | 4.800 |
| POSTF | | 16 | 229.163 | 9.411 | 4.107 |
| ES/EL (%) | | 16 | 92.863 | 4.286 | 4.616 |
| NH/EL (%) | | 16 | 56.161 | 24.268 | 43.227 |
| (EL-EC)/EL (%) | | 16 | 97.823 | 2.270 | 2.321 |
| VE/ES (%) | | 16 | 83.313 | 23.646 | 28.382 |
| NH/ES (%) | | 16 | 60.599 | 25.295 | 41.741 |
| HS/ES (%) | | 16 | 54.478 | 26.387 | 48.436 |
| LE/VE (%) | | 15 | 99.128 | 1.693 | 1.708 |
| NH/LE (%) | | 15 | 72.927 | 19.320 | 26.493 |
| HS/NH (%) | | 15 | 87.494 | 11.748 | 13.427 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
10:48 Wednesday, June 24, 1998

LEVEL=TRT2

| Variable Label | N | Mean | Std Dev | CV | |
|----------------|----------------|---------|---------|---------|--------|
| EL | 16 | 47.250 | 13.178 | 27.891 | |
| EC | 16 | 1.125 | 1.628 | 144.701 | |
| ES | 16 | 43.125 | 12.350 | 28.637 | |
| VE | 16 | 33.750 | 13.168 | 39.017 | |
| LE | 16 | 33.438 | 13.155 | 39.343 | |
| NH | 16 | 25.813 | 11.496 | 44.537 | |
| HS | 16 | 22.688 | 10.581 | 46.639 | |
| THICK | 16 | 0.204 | 0.009 | 4.214 | |
| HATWT | 16 | 6.349 | 0.568 | 8.940 | |
| SURVWT | 15 | 24.447 | 1.772 | 7.250 | |
| FOOD | 16 | 19.950 | 1.199 | 6.012 | |
| PREM | 16 | 197.075 | 10.173 | 5.162 | |
| POSTM | 16 | 203.175 | 12.306 | 6.057 | |
| PREF | 16 | 193.456 | 6.929 | 3.582 | |
| POSTF | 16 | 228.263 | 9.692 | 4.246 | |
| ES_EL | ES/EL (%) | 16 | 90.665 | 5.489 | 6.054 |
| NH_EL | NH/EL (%) | 16 | 54.158 | 15.416 | 28.466 |
| ENC_EL | (EL-EC)/EL (%) | 16 | 97.148 | 3.889 | 4.003 |
| VE_ES | VE/ES (%) | 16 | 78.458 | 18.442 | 23.506 |
| NH_ES | NH/ES (%) | 16 | 60.270 | 18.393 | 30.518 |
| HS_ES | HS/ES (%) | 16 | 49.957 | 21.355 | 42.747 |
| LE_VE | LE/VE (%) | 16 | 99.018 | 1.576 | 1.592 |
| NH_LE | NH/LE (%) | 16 | 77.188 | 13.410 | 17.373 |
| HS_NH | HS/NH (%) | 16 | 84.386 | 24.005 | 28.447 |

LEVEL=TRT3

| Variable Label | N | Mean | Std Dev | CV | |
|----------------|----------------|---------|---------|--------|--------|
| EL | 16 | 39.563 | 17.370 | 43.906 | |
| EC | 16 | 0.813 | 0.750 | 92.308 | |
| ES | 16 | 36.375 | 15.882 | 43.663 | |
| VE | 16 | 31.063 | 15.571 | 50.129 | |
| LE | 16 | 30.875 | 15.491 | 50.175 | |
| NH | 16 | 26.438 | 14.629 | 55.333 | |
| HS | 16 | 23.000 | 14.738 | 64.077 | |
| THICK | 15 | 0.197 | 0.012 | 6.228 | |
| HATWT | 15 | 6.583 | 0.338 | 5.129 | |
| SURVWT | 15 | 24.467 | 2.566 | 10.486 | |
| FOOD | 16 | 19.788 | 1.036 | 5.235 | |
| PREM | 16 | 198.281 | 11.749 | 5.926 | |
| POSTM | 16 | 199.144 | 11.691 | 5.871 | |
| PREF | 16 | 192.269 | 8.491 | 4.416 | |
| POSTF | 16 | 221.506 | 15.593 | 7.040 | |
| ES_EL | ES/EL (%) | 15 | 91.925 | 2.801 | 3.047 |
| NH_EL | NH/EL (%) | 15 | 66.452 | 17.364 | 26.130 |
| ENC_EL | (EL-EC)/EL (%) | 15 | 97.777 | 2.149 | 2.198 |
| VE_ES | VE/ES (%) | 15 | 84.941 | 14.321 | 16.860 |
| NH_ES | NH/ES (%) | 15 | 72.339 | 18.866 | 26.080 |
| HS_ES | HS/ES (%) | 15 | 61.334 | 19.210 | 31.320 |
| LE_VE | LE/VE (%) | 15 | 99.364 | 1.483 | 1.493 |
| NH_LE | NH/LE (%) | 15 | 84.734 | 14.133 | 16.679 |
| HS_NH | HS/NH (%) | 15 | 84.345 | 13.223 | 15.677 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
1. ANALYSIS OF EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Class Level Information

Class Levels Values

LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
1. ANALYSIS OF EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

Effect Coefficients

INTERCEPT 0

LEVEL CONTROL L2
TRT1 L3
TRT2 L4
TRT3 -L2-L3-L4PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
1. ANALYSIS OF EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: EL

Source DF Sum of Squares Mean Square F Value Pr > F
Model 3 572.87500 190.95833 0.64 0.5911
Error 60 17849.12500 297.48542Corrected Total 63 18422.00000
R-Square C.V. Root MSE EL Mean
0.031097 40.58298 17.248 42.500Source DF Type I SS Mean Square F Value Pr > F
LEVEL 3 572.87500 190.95833 0.64 0.5911PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
1. ANALYSIS OF EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Least Squares MeansLEVEL EL Pr > |T| HO: LSMEAN(i)=LSMEAN(j)
LSMEAN i/j 1 2 3 4
CONTROL 40.3750000 1 0.6908 0.2641 0.8944
TRT1 42.8125000 2 0.6908 0.4696 0.5960
TRT2 47.2500000 3 0.2641 0.4696 0.2123
TRT3 39.5625000 4 0.8944 0.5960 0.2123NOTE: To ensure overall protection level, only probabilities associated
with pre-planned comparisons should be used.

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PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
1. ANALYSIS OF EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: EL

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 297.4854
 Critical Value of Studentized Range= 3.737
 Minimum Significant Difference= 16.114

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | | Simultaneous Lower Confidence Limit | Difference Between Means | Simultaneous Upper Confidence Limit |
|------------------|---|-------------------------------------|--------------------------|-------------------------------------|
| TRT2 - TRT1 | - | -11.677 | 4.438 | 20.552 |
| TRT2 - CONTROL | - | -9.239 | 6.875 | 22.989 |
| TRT2 - TRT3 | - | -8.427 | 7.688 | 23.802 |
| TRT1 - TRT2 | - | -20.552 | -4.438 | 11.677 |
| TRT1 - CONTROL | - | -13.677 | 2.438 | 18.552 |
| TRT1 - TRT3 | - | -12.864 | 3.250 | 19.364 |
| CONTROL - TRT2 | - | -22.989 | -6.875 | 9.239 |
| CONTROL - TRT1 | - | -18.552 | -2.438 | 13.677 |
| CONTROL - TRT3 | - | -15.302 | 0.813 | 16.927 |
| TRT3 - TRT2 | - | -23.802 | -7.688 | 8.427 |
| TRT3 - TRT1 | - | -19.364 | -3.250 | 12.864 |
| TRT3 - CONTROL | - | -16.927 | -0.813 | 15.302 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
1. ANALYSIS OF EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: EL

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 297.4854
 Critical Value of Dunnett's T= 2.104
 Minimum Significant Difference= 12.83

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | | Simultaneous Lower Confidence Limit | Difference Between Means | Simultaneous Upper Confidence Limit |
|------------------|---|-------------------------------------|--------------------------|-------------------------------------|
| TRT2 - CONTROL | - | -5.955 | 6.875 | 19.705 |
| TRT1 - CONTROL | - | -10.392 | 2.438 | 15.267 |
| TRT3 - CONTROL | - | -13.642 | -0.813 | 12.017 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

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2. ANALYSIS OF EGGS CRACKED

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Class Level Information

| Class | Levels | Values |
|-------|--------|------------------------|
| LEVEL | 4 | CONTROL TRT1 TRT2 TRT3 |

Number of observations in data set = 64

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
2. ANALYSIS OF EGGS CRACKED

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

| Effect | Coefficients |
|-----------|--|
| INTERCEPT | 0 |
| LEVEL | CONTROL L2 TRT1 L3 TRT2 L4 TRT3 -L2-L3-L4 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
2. ANALYSIS OF EGGS CRACKED

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

| Dependent Variable: EC | Sum of Squares | Mean Square | F Value | Pr > F |
|------------------------|----------------|-------------|-------------|---------|
| Source | DF | | | |
| Model | 3 | 0.9218750 | 0.3072917 | 0.20 |
| Error | 60 | 92.0625000 | 1.5343750 | |
| Corrected Total | 63 | 92.9843750 | | |
| | R-Square | C.V. | Root MSE | EC Mean |
| | 0.009914 | 125.8361 | 1.2387 | 0.9844 |
| Source | DF | Type I SS | Mean Square | F Value |
| LEVEL | 3 | 0.9218750 | 0.3072917 | 0.20 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
2. ANALYSIS OF EGGS CRACKED

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Least Squares Means

| LEVEL | EC | Pr > T | HO: LSMEAN(i)=LSMEAN(j) |
|-------|----|---------|-------------------------|
|-------|----|---------|-------------------------|

| | LSMEAN | i/j | 1 | 2 | 3 | 4 |
|---------|------------|-----|--------|--------|--------|---|
| CONTROL | 0.93750000 | 1 | 0.7763 | 0.6701 | 0.7763 | |
| TRT1 | 1.06250000 | 2 | 0.7763 | 0.8870 | 0.5702 | |
| TRT2 | 1.12500000 | 3 | 0.6701 | 0.8870 | 0.4783 | |
| TRT3 | 0.81250000 | 4 | 0.7763 | 0.5702 | 0.4783 | |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
2. ANALYSIS OF EGGS CRACKED

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: EC

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 1.534375
Critical Value of Studentized Range= 3.737
Minimum Significant Difference= 1.1573

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | | Simultaneous Upper Confidence Limit | |
|------------------|-------------------------------------|---------|-------------------------------------|--|
| | Difference Between Means | | | |
| TRT2 - TRT1 | -1.0948 | 0.0625 | 1.2198 | |
| TRT2 - CONTROL | -0.9698 | 0.1875 | 1.3448 | |
| TRT2 - TRT3 | -0.8448 | 0.3125 | 1.4698 | |
| TRT1 - TRT2 | -1.2198 | -0.0625 | 0.9698 | |
| TRT1 - CONTROL | -1.0323 | 0.1250 | 1.2823 | |
| TRT1 - TRT3 | -0.9073 | 0.2500 | 1.4073 | |
| CONTROL - TRT2 | -1.3448 | -0.1875 | 0.9698 | |
| CONTROL - TRT1 | -1.2823 | -0.1250 | 1.0323 | |
| CONTROL - TRT3 | -1.0323 | 0.1250 | 1.2823 | |
| TRT3 - TRT2 | -1.4698 | -0.3125 | 0.8448 | |
| TRT3 - TRT1 | -1.4073 | -0.2500 | 0.9073 | |
| TRT3 - CONTROL | -1.2823 | -0.1250 | 1.0323 | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
2. ANALYSIS OF EGGS CRACKED

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: EC

NOTE: This test controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 1.534375
Critical Value of Dunnett's T= 2.104
Minimum Significant Difference= 0.9214

Comparisons significant at the 0.05 level are indicated by ****.

Simultaneous Simultaneous

| LEVEL Comparison | Lower Confidence Limit | Difference Between Means | Upper Confidence Limit |
|------------------|------------------------|--------------------------|------------------------|
| TRT2 - CONTROL | -0.7339 | 0.1875 | 1.1089 |
| TRT1 - CONTROL | -0.7964 | 0.1250 | 1.0464 |
| TRT3 - CONTROL | -1.0464 | -0.1250 | 0.7964 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

3. ANALYSIS OF EGGS SET

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Class Level Information

| Class | Levels | Values |
|-------|--------|------------------------|
| LEVEL | 4 | CONTROL TRT1 TRT2 TRT3 |

Number of observations in data set = 64

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
3. ANALYSIS OF EGGS SET

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

| Effect | Coefficients |
|-----------|----------------|
| INTERCEPT | 0 |
| LEVEL | CONTROL L2 |
| | TRT1 L3 |
| | TRT2 L4 |
| | TRT3 -L2-L3-L4 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
3. ANALYSIS OF EGGS SET

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: ES

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----------|----------------|-------------|---------|--------|
| Model | 3 | 445.62500 | 148.54167 | 0.58 | 0.6283 |
| Error | 60 | 15282.37500 | 254.70625 | | |
| Corrected Total | 63 | 15728.00000 | | | |
| | R-Square | C.V. | Root MSE | ES Mean | |
| | 0.028333 | 40.92184 | 15.960 | 39.000 | |
| Source | DF | Type I SS | Mean Square | F Value | Pr > F |
| LEVEL | 3 | 445.62500 | 148.54167 | 0.58 | 0.6283 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 3. ANALYSIS OF EGGS SET

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Least Squares Means

| LEVEL | ES | Pr > T | H0: LSMEAN(i)=LSMEAN(j) | | | | |
|---------|------------|---------|-------------------------|--------|--------|---|---|
| | | | i/j | 1 | 2 | 3 | 4 |
| CONTROL | 37.0625000 | 1 | 0.6753 | 0.2869 | 0.9034 | | |
| TRT1 | 39.4375000 | 2 | 0.6753 | 0.5159 | 0.5893 | | |
| TRT2 | 43.1250000 | 3 | 0.2869 | 0.5159 | 0.2363 | | |
| TRT3 | 36.3750000 | 4 | 0.9034 | 0.5893 | 0.2363 | | |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 3. ANALYSIS OF EGGS SET

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: ES

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 254.7063
 Critical Value of Studentized Range= 3.737
 Minimum Significant Difference= 14.911

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | Simultaneous Difference Between Means | | Simultaneous Upper Confidence Limit |
|------------------|-------------------------------------|---------------------------------------|------------------------|-------------------------------------|
| | | Between Means | Upper Confidence Limit | |
| TRT2 - TRT1 | -11.223 | 3.688 | 18.598 | |
| TRT2 - CONTROL | -8.848 | 6.063 | 20.973 | |
| TRT2 - TRT3 | -8.161 | 6.750 | 21.661 | |
| TRT1 - TRT2 | -18.598 | -3.688 | 11.223 | |
| TRT1 - CONTROL | -12.536 | 2.375 | 17.286 | |
| TRT1 - TRT3 | -11.848 | 3.063 | 17.973 | |
| CONTROL - TRT2 | -20.973 | -6.063 | 8.848 | |
| CONTROL - TRT1 | -17.286 | -2.375 | 12.536 | |
| CONTROL - TRT3 | -14.223 | 0.688 | 15.598 | |
| TRT3 - TRT2 | -21.661 | -6.750 | 8.161 | |
| TRT3 - TRT1 | -17.973 | -3.063 | 11.848 | |
| TRT3 - CONTROL | -15.598 | -0.688 | 14.223 | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 3. ANALYSIS OF EGGS SET

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: ES

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 254.7063
 Critical Value of Dunnett's T= 2.104
 Minimum Significant Difference= 11.871

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | Simultaneous Difference Between Means | | Simultaneous Upper Confidence Limit |
|------------------|-------------------------------------|---------------------------------------|------------------------|-------------------------------------|
| | | Between Means | Upper Confidence Limit | |
| TRT2 - CONTROL | -5.809 | 6.063 | 17.934 | |
| TRT1 - CONTROL | -9.496 | 2.375 | 14.246 | |
| TRT3 - CONTROL | -12.559 | -0.688 | 11.184 | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 4. ANALYSIS OF Viable EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Class Level Information

| Class | Levels | Values |
|-------|--------|------------------------|
| LEVEL | 4 | CONTROL TRT1 TRT2 TRT3 |

Number of observations in data set = 64

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 4. ANALYSIS OF Viable EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

| Effect | Coefficients |
|-----------|--|
| INTERCEPT | 0 |
| LEVEL | CONTROL L2 TRT1 L3 TRT2 L4 TRT3 -L2-L3-L4 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 4. ANALYSIS OF Viable EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

| Dependent Variable: VE | Sum of Squares | Mean Square | F Value | Pr > F |
|------------------------|----------------|-------------|-----------|--------|
| Source | DF | | | |
| Model | 3 | 122.79688 | 40.93229 | 0.18 |
| Error | 60 | 13887.81250 | 231.46354 | |
| Corrected Total | 63 | 14010.60938 | | |

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 R-Square C.V. Root MSE VE Mean
 0.008765 45.99392 15.214 33.078

Source DF Type I SS Mean Square F Value Pr > F
 LEVEL 3 122.79688 40.93229 0.18 0.9117

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 4. ANALYSIS OF Viable EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Least Squares Means

| LEVEL | VE | Pr > T | H0: LSMEAN(i)=LSMEAN(j) | | | |
|---------|------------|---------|-------------------------|--------|--------|--------|
| | | | i/j | 1 | 2 | 3 |
| CONTROL | 32.6875000 | 1 | 0.6942 | 0.8441 | 0.7636 | |
| TRT1 | 34.8125000 | 2 | 0.6942 | 0.8441 | 0.4884 | |
| TRT2 | 33.7500000 | 3 | 0.8441 | 0.8441 | . | 0.6192 |
| TRT3 | 31.0625000 | 4 | 0.7636 | 0.4884 | 0.6192 | . |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 4. ANALYSIS OF Viable EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: VE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 231.4635
 Critical Value of Studentized Range= 3.737
 Minimum Significant Difference= 14.214

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL | Comparison | Simultaneous Lower Confidence Limit | | Simultaneous Upper Confidence Limit | |
|---------|------------|-------------------------------------|--------|-------------------------------------|------------------|
| | | Difference Between Means | | | Confidence Limit |
| TRT1 | - TRT2 | -13.151 | 1.063 | 15.276 | |
| TRT1 | - CONTROL | -12.089 | 2.125 | 16.339 | |
| TRT1 | - TRT3 | -10.464 | 3.750 | 17.964 | |
| TRT2 | - TRT1 | -15.276 | -1.063 | 13.151 | |
| TRT2 | - CONTROL | -13.151 | 1.063 | 15.276 | |
| TRT2 | - TRT3 | -11.526 | 2.688 | 16.901 | |
| CONTROL | - TRT1 | -16.339 | -2.125 | 12.089 | |
| CONTROL | - TRT2 | -15.276 | -1.063 | 13.151 | |
| CONTROL | - TRT3 | -12.589 | 1.625 | 15.839 | |
| TRT3 | - TRT1 | -17.964 | -3.750 | 10.464 | |
| TRT3 | - TRT2 | -16.901 | -2.688 | 11.526 | |
| TRT3 | - CONTROL | -15.839 | -1.625 | 12.589 | |

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PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 4. ANALYSIS OF Viable EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: VE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 231.4635
 Critical Value of Dunnett's T= 2.104
 Minimum Significant Difference= 11.317

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL | Comparison | Simultaneous Lower Confidence Limit | | Simultaneous Upper Confidence Limit | |
|-------|------------|-------------------------------------|------------------|-------------------------------------|------------------|
| | | Between Means | Confidence Limit | Between Means | Confidence Limit |
| TRT1 | - CONTROL | -9.192 | 2.125 | 13.442 | |
| TRT2 | - CONTROL | -10.254 | 1.063 | 12.379 | |
| TRT3 | - CONTROL | -12.942 | -1.625 | 9.692 | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Class Level Information

| Class | Levels | Values |
|-------|--------|------------------------|
| LEVEL | 4 | CONTROL TRT1 TRT2 TRT3 |

Number of observations in data set = 64

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

| Effect | Coefficients |
|-----------|----------------|
| INTERCEPT | 0 |
| LEVEL | CONTROL L2 |
| | TRT1 L3 |
| | TRT2 L4 |
| | TRT3 -L2-L3-L4 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

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Dependent Variable: LE

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----------|----------------|-------------|---------|--------|
| Model | 3 | 115.81250 | 38.60417 | 0.17 | 0.9154 |
| Error | 60 | 13521.12500 | 225.35208 | | |
| Corrected Total | 63 | 13636.93750 | | | |
| | R-Square | C.V. | Root MSE | LE Mean | |
| | 0.008493 | 45.79365 | 15.012 | 32.781 | |
| Source | DF | Type I SS | Mean Square | F Value | Pr > F |
| LEVEL | 3 | 115.81250 | 38.60417 | 0.17 | 0.9154 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Least Squares Means

| LEVEL | LE | Pr > T | HO: LSMEAN(i)=LSMEAN(j) | | | |
|---------|------------|---------|-------------------------|--------|--------|---|
| | | | i/j | 1 | 2 | 3 |
| CONTROL | 32.3125000 | 1 | 0.6817 | 0.8329 | 0.7874 | |
| TRT1 | 34.5000000 | 2 | 0.6817 | 0.8420 | 0.4972 | |
| TRT2 | 33.4375000 | 3 | 0.8329 | 0.8420 | 0.6310 | |
| TRT3 | 30.8750000 | 4 | 0.7874 | 0.4972 | 0.6310 | |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: LE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 225.3521

Critical Value of Studentized Range= 3.737

Minimum Significant Difference= 14.025

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | | Simultaneous Difference Between Means | | Simultaneous Upper Confidence Limit | |
|---------------------|--|--------|--|-----------|--|--------|
| | TRT1 | - TRT2 | TRT1 | - CONTROL | TRT1 | - TRT3 |
| TRT1 | -12.963 | 1.063 | 15.088 | | | |
| TRT1 | -11.838 | 2.188 | 16.213 | | | |
| TRT1 | -10.400 | 3.625 | 17.650 | | | |
| TRT2 | -15.088 | -1.063 | 12.963 | | | |
| TRT2 | -12.900 | 1.125 | 15.150 | | | |

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| | | | |
|----------------|---------|--------|--------|
| TRT2 - TRT3 | -11.463 | 2.563 | 16.588 |
| CONTROL - TRT1 | -16.213 | -2.188 | 11.838 |
| CONTROL - TRT2 | -15.150 | -1.125 | 12.900 |
| CONTROL - TRT3 | -12.588 | 1.438 | 15.463 |
| TRT3 - TRT1 | -17.650 | -3.625 | 10.400 |
| TRT3 - TRT2 | -16.588 | -2.563 | 11.463 |
| TRT3 - CONTROL | -15.463 | -1.438 | 12.588 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: LE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 225.3521

Critical Value of Dunnett's T= 2.104

Minimum Significant Difference= 11.166

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | Simultaneous Difference Between Means | Simultaneous Upper Confidence Limit | |
|---------------------|--|--|--|------------------------------|
| | | | Between Means | Upper Confidence Limit |
| TRT1 - CONTROL | -8.979 | 2.188 | 13.354 | |
| TRT2 - CONTROL | -10.041 | 1.125 | 12.291 | |
| TRT3 - CONTROL | -12.604 | -1.438 | 9.729 | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

6. ANALYSIS OF NORMAL HATCHLINGS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Class Level Information

| Class | Levels | Values |
|-------|--------|------------------------|
| LEVEL | 4 | CONTROL TRT1 TRT2 TRT3 |

Number of observations in data set = 64

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

6. ANALYSIS OF NORMAL HATCHLINGS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Type I Estimable Functions for: LEVEL

| Effect | Coefficients |
|-----------|-----------------------|
| INTERCEPT | 0 |
| LEVEL | CONTROL L2 TRT1 L3 |

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TRT2 L4
TRT3 -L2-L3-L4

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

6. ANALYSIS OF NORMAL HATCHLINGS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: NH

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|--------|----|----------------|-------------|---------|--------|
|--------|----|----------------|-------------|---------|--------|

| | | | | | |
|-------|---|-----------|----------|------|--------|
| Model | 3 | 27.671875 | 9.223958 | 0.05 | 0.9838 |
|-------|---|-----------|----------|------|--------|

| | | | | | |
|-------|----|-------------|------------|--|--|
| Error | 60 | 10468.31250 | 174.471875 | | |
|-------|----|-------------|------------|--|--|

| | | | | | |
|-----------------|----|-------------|--|--|--|
| Corrected Total | 63 | 10495.98438 | | | |
|-----------------|----|-------------|--|--|--|

| R-Square | C.V. | Root MSE | NH Mean |
|----------|----------|----------|---------|
| 0.002636 | 51.76742 | 13.209 | 25.516 |

| Source | DF | Type I SS | Mean Square | F Value | Pr > F |
|--------|----|-----------|-------------|---------|--------|
|--------|----|-----------|-------------|---------|--------|

| | | | | | |
|-------|---|-----------|----------|------|--------|
| LEVEL | 3 | 27.671875 | 9.223958 | 0.05 | 0.9838 |
|-------|---|-----------|----------|------|--------|

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

6. ANALYSIS OF NORMAL HATCHLINGS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Least Squares Means

| LEVEL | NH | Pr > T | HO: LSMEAN(i)=LSMEAN(j) | | | |
|---------|------------|---------|-------------------------|--------|--------|---|
| | | | i/j | 1 | 2 | 3 |
| CONTROL | 25.0625000 | 1 | 0.9469 | 0.8729 | 0.7694 | |
| TRT1 | 24.7500000 | 2 | 0.9469 | 0.8208 | 0.7191 | |
| TRT2 | 25.8125000 | 3 | 0.8729 | 0.8208 | 0.8940 | |
| TRT3 | 26.4375000 | 4 | 0.7694 | 0.7191 | 0.8940 | |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

6. ANALYSIS OF NORMAL HATCHLINGS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: NH

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 174.4719

Critical Value of Studentized Range= 3.737

Minimum Significant Difference= 12.341

Comparisons significant at the 0.05 level are indicated by ****.

Simultaneous Simultaneous

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| LEVEL Comparison | Lower Confidence Limit | Difference Between Means | Upper Confidence Limit |
|------------------|------------------------|--------------------------|------------------------|
|------------------|------------------------|--------------------------|------------------------|

| | | | |
|----------------|---------|-------|--------|
| TRT3 - TRT2 | -11.716 | 0.625 | 12.966 |
| TRT3 - CONTROL | -10.966 | 1.375 | 13.716 |
| TRT3 - TRT1 | -10.653 | 1.688 | 14.028 |

| | | | |
|----------------|---------|--------|--------|
| TRT2 - TRT3 | -12.966 | -0.625 | 11.716 |
| TRT2 - CONTROL | -11.591 | 0.750 | 13.091 |
| TRT2 - TRT1 | -11.278 | 1.063 | 13.403 |

| | | | |
|----------------|---------|--------|--------|
| CONTROL - TRT3 | -13.716 | -1.375 | 10.966 |
| CONTROL - TRT2 | -13.091 | -0.750 | 11.591 |
| CONTROL - TRT1 | -12.028 | 0.313 | 12.653 |

| | | | |
|----------------|---------|--------|--------|
| TRT1 - TRT3 | -14.028 | -1.688 | 10.653 |
| TRT1 - TRT2 | -13.403 | -1.063 | 11.278 |
| TRT1 - CONTROL | -12.653 | -0.313 | 12.028 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

6. ANALYSIS OF NORMAL HATCHLINGS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: NH

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 174.4719

Critical Value of Dunnett's T= 2.104

Minimum Significant Difference= 9.8253

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | Difference Between Means | Simultaneous Upper Confidence Limit |
|------------------|-------------------------------------|--------------------------|-------------------------------------|
|------------------|-------------------------------------|--------------------------|-------------------------------------|

| | | | |
|----------------|---------|--------|--------|
| TRT3 - CONTROL | -8.450 | 1.375 | 11.200 |
| TRT2 - CONTROL | -9.075 | 0.750 | 10.575 |
| TRT1 - CONTROL | -10.138 | -0.313 | 9.513 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

7. ANALYSIS OF 14-DAY-OLD SURVIVORS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Class Level Information

| Class | Levels | Values |
|-------|--------|--------|
|-------|--------|--------|

| | | |
|-------|---|------------------------|
| LEVEL | 4 | CONTROL TRT1 TRT2 TRT3 |
|-------|---|------------------------|

Number of observations in data set = 64

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

7. ANALYSIS OF 14-DAY-OLD SURVIVORS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

Effect Coefficients

INTERCEPT 0

LEVEL CONTROL L2
TRT1 L3
TRT2 L4
TRT3 -L2-L3-L4

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: HS

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----|----------------|-------------|---------|--------|
| Model | 3 | 8.6250000 | 2.8750000 | 0.02 | 0.9969 |
| Error | 60 | 9939.375000 | 165.6562500 | | |
| Corrected Total | 63 | 9948.000000 | | | |

| R-Square | C.V. | Root MSE | HS Mean |
|----------|----------|----------|---------|
| 0.000867 | 57.20334 | 12.871 | 22.500 |

| Source | DF | Type I SS | Mean Square | F Value | Pr > F |
|--------|----|-----------|-------------|---------|--------|
| LEVEL | 3 | 8.6250000 | 2.8750000 | 0.02 | 0.9969 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Least Squares Means

| LEVEL | HS | Pr > T | H0: LSMEAN(i)=LSMEAN(j) |
|---------|------------|---------|-------------------------|
| | LSMEAN | i/j | 1 2 3 4 |
| CONTROL | 22.2500000 | 1 | 0.9673 0.9237 0.8696 |
| TRT1 | 22.0625000 | 2 | 0.9673 0.8912 0.8375 |
| TRT2 | 22.6875000 | 3 | 0.9237 0.8912 0.9455 |
| TRT3 | 23.0000000 | 4 | 0.8696 0.8375 0.9455 |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: HS

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 165.6563
Critical Value of Studentized Range= 3.737
Minimum Significant Difference= 12.025

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | Difference Between Means | Simultaneous Upper Confidence Limit |
|------------------|-------------------------------------|--------------------------|-------------------------------------|
| TRT3 - TRT2 | -11.7123 | 0.3125 | 12.3373 |
| TRT3 - CONTROL | -11.2748 | 0.7500 | 12.7748 |
| TRT3 - TRT1 | -11.0873 | 0.9375 | 12.9623 |
| TRT2 - TRT3 | -12.3373 | -0.3125 | 11.7123 |
| TRT2 - CONTROL | -11.5873 | 0.4375 | 12.4623 |
| TRT2 - TRT1 | -11.3998 | 0.6250 | 12.6498 |
| CONTROL - TRT3 | -12.7748 | -0.7500 | 11.2748 |
| CONTROL - TRT2 | -12.4623 | -0.4375 | 11.5873 |
| CONTROL - TRT1 | -11.8373 | 0.1875 | 12.2123 |
| TRT1 - TRT3 | -12.9623 | -0.9375 | 11.0873 |
| TRT1 - TRT2 | -12.6498 | -0.6250 | 11.3998 |
| TRT1 - CONTROL | -12.2123 | -0.1875 | 11.8373 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: HS

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 165.6563
Critical Value of Dunnett's T= 2.104
Minimum Significant Difference= 9.5739

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | Difference Between Means | Simultaneous Upper Confidence Limit |
|------------------|-------------------------------------|--------------------------|-------------------------------------|
| TRT3 - CONTROL | -8.8239 | 0.7500 | 10.3239 |
| TRT2 - CONTROL | -9.1364 | 0.4375 | 10.0114 |
| TRT1 - CONTROL | -9.7614 | -0.1875 | 9.3864 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
8. ANALYSIS OF EGGS SET/EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Class Level Information

Class Levels Values

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LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 63 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
8. ANALYSIS OF EGGS SET/EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

| Effect | Coefficients |
|-----------|--|
| INTERCEPT | 0 |
| LEVEL | CONTROL L2 TRT1 L3 TRT2 L4 TRT3 -L2-L3-L4 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
8. ANALYSIS OF EGGS SET/EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: RESPONSE

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----------|----------------|-------------|---------------|--------|
| Model | 3 | 74.952420 | 24.984140 | 0.73 | 0.5405 |
| Error | 59 | 2030.207199 | 34.410292 | | |
| Corrected Total | 62 | 2105.159619 | | | |
| | R-Square | C.V. | Root MSE | RESPONSE Mean | |
| | 0.035604 | 7.913877 | 5.8660 | 74.123 | |

| Source | DF | Type I SS | Mean Square | F Value | Pr > F |
|--------|----|-----------|-------------|---------|--------|
| LEVEL | 3 | 74.952420 | 24.984140 | 0.73 | 0.5405 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
8. ANALYSIS OF EGGS SET/EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Least Squares Means

| LEVEL | RESPONSE LSMEAN | Pr > T H0: LSMEAN(i)=LSMEAN(j) i/j 1 2 3 4 |
|---------|-----------------|---|
| CONTROL | 74.1893687 | 1 0.4456 0.5045 0.8169 |
| TRT1 | 75.7819226 | 2 0.4456 0.1553 0.3272 |
| TRT2 | 72.7965378 | 3 0.5045 0.1553 0.6702 |
| TRT3 | 73.6989299 | 4 0.8169 0.3272 0.6702 |

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NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
8. ANALYSIS OF EGGS SET/EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 34.41029
Critical Value of Studentized Range= 3.739

Comparisons significant at the 0.05 level are indicated by *****.

| | | Simultaneous Lower Difference Simultaneous Upper |
|---------|-----------|--|
| | | LEVEL Comparison Confidence Limit Between Means Confidence Limit |
| TRT1 | - CONTROL | -3.891 1.593 7.076 |
| TRT1 | - TRT3 | -3.491 2.083 7.657 |
| TRT1 | - TRT2 | -2.498 2.985 8.468 |
| CONTROL | - TRT1 | -7.076 -1.593 3.891 |
| CONTROL | - TRT3 | -5.083 0.490 6.064 |
| CONTROL | - TRT2 | -4.090 1.393 6.876 |
| TRT3 | - TRT1 | -7.657 -2.083 3.491 |
| TRT3 | - CONTROL | -6.064 -0.490 5.083 |
| TRT3 | - TRT2 | -4.671 0.902 6.476 |
| TRT2 | - TRT1 | -8.468 -2.985 2.498 |
| TRT2 | - CONTROL | -6.876 -1.393 4.090 |
| TRT2 | - TRT3 | -6.476 -0.902 4.671 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
8. ANALYSIS OF EGGS SET/EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 34.41029
Critical Value of Dunnett's T= 2.106

Comparisons significant at the 0.05 level are indicated by *****.

| | | Simultaneous Lower Difference Simultaneous Upper |
|------|-----------|--|
| | | LEVEL Comparison Confidence Limit Between Means Confidence Limit |
| TRT1 | - CONTROL | -2.775 1.593 5.960 |
| TRT3 | - CONTROL | -4.930 -0.490 3.949 |
| TRT2 | - CONTROL | -5.760 -1.393 2.975 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Class Level Information

| Class | Levels | Values |
|-------|--------|------------------------|
| LEVEL | 4 | CONTROL TRT1 TRT2 TRT3 |

Number of observations in data set = 64

NOTE: Due to missing values, only 63 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

| Effect | Coefficients |
|--------|--------------|
|--------|--------------|

INTERCEPT 0

| LEVEL | CONTROL | L2 |
|-------|---------|-----------|
| | TRT1 | L3 |
| | TRT2 | L4 |
| | TRT3 | -L2-L3-L4 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: RESPONSE

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|--------|----|----------------|-------------|---------|--------|
| Model | 3 | 181.39820 | 60.46607 | 0.19 | 0.9061 |
| Error | 59 | 19270.56141 | 326.61968 | | |

Corrected Total 62 19451.95960

| R-Square | C.V. | Root MSE | RESPONSE Mean |
|----------|----------|----------|---------------|
| 0.009325 | 26.59850 | 18.073 | 67.946 |

| Source | DF | Type I SS | Mean Square | F Value | Pr > F |
|--------|----|-----------|-------------|---------|--------|
| LEVEL | 3 | 181.39820 | 60.46607 | 0.19 | 0.9061 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Least Squares Means

| LEVEL | RESPONSE LSMEAN | Pr > T H0: LSMEAN(i)=LSMEAN(j) | i/j | 1 | 2 | 3 | 4 |
|---------|-----------------|----------------------------------|--------|--------|--------|--------|---|
| CONTROL | 68.9626746 | 1 | | 0.9379 | 0.5466 | 0.9516 | |
| TRT1 | 68.4630269 | 2 | 0.9379 | | 0.5994 | 0.8908 | |
| TRT2 | 65.0882937 | 3 | 0.5466 | 0.5994 | | 0.5135 | |
| TRT3 | 69.3583109 | 4 | 0.9516 | 0.8908 | 0.5135 | | |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 326.6197
 Critical Value of Studentized Range= 3.739

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Difference | | Simultaneous Upper | |
|------------------|-------------------------------|---------------|--------------------|-------|
| | Confidence Limit | Between Means | Confidence Limit | Upper |
| TRT3 - CONTROL | -16.776 | 0.396 | 17.568 | |
| TRT3 - TRT1 | -16.277 | 0.895 | 18.067 | |
| TRT3 - TRT2 | -12.902 | 4.270 | 21.442 | |
| CONTROL - TRT3 | -17.568 | -0.396 | 16.776 | |
| CONTROL - TRT1 | -16.393 | 0.500 | 17.393 | |
| CONTROL - TRT2 | -13.018 | 3.874 | 20.767 | |
| TRT1 - TRT3 | -18.067 | -0.895 | 16.277 | |
| TRT1 - CONTROL | -17.393 | -0.500 | 16.393 | |
| TRT1 - TRT2 | -13.518 | 3.375 | 20.268 | |
| TRT2 - TRT3 | -21.442 | -4.270 | 12.902 | |
| TRT2 - CONTROL | -20.767 | -3.874 | 13.018 | |
| TRT2 - TRT1 | -20.268 | -3.375 | 13.518 | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 326.6197
 Critical Value of Dunnett's T= 2.106

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Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | | Difference Between Means | Simultaneous Upper Confidence Limit | |
|---------------------|--|---------|-----------------------------|--|--|
| | TRT3 - CONTROL | -13.283 | 0.396 | 14.074 | |
| TRT1 - CONTROL | -13.956 | -0.500 | 12.957 | | |
| TRT2 - CONTROL | -17.331 | -3.874 | 9.582 | | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIABLE EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Class Level InformationClass Levels Values
LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 61 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIABLE EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

Effect Coefficients

INTERCEPT 0

LEVEL CONTROL L2
TRT1 L3
TRT2 L4
TRT3 -L2-L3-L4PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIABLE EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: RESPONSE

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----------|----------------|---------------|---------|--------|
| Model | 3 | 12.854968 | 4.284989 | 0.20 | 0.8974 |
| Error | 57 | 1233.884948 | 21.647104 | | |
| Corrected Total | 60 | 1246.739916 | | | |
| R-Square | C.V. | Root MSE | RESPONSE Mean | | |
| 0.010311 | 5.320971 | 4.6526 | 87.440 | | |

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Source DF Type I SS Mean Square F Value Pr > F
LEVEL 3 12.854968 4.284989 0.20 0.8974PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIABLE EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Least Squares Means

| LEVEL | RESPONSE LSMEAN | Pr > T H0: LSMEAN(i)=LSMEAN(j) | | | |
|---------|--------------------|----------------------------------|--------|--------|--------|
| | | i/j | 1 | 2 | 3 |
| CONTROL | 87.7849986 | 1 | 0.7551 | 0.5596 | 0.9181 |
| TRT1 | 87.2525760 | 2 | 0.7551 | 0.7893 | 0.6785 |
| TRT2 | 86.8035531 | 3 | 0.5596 | 0.7893 | 0.4919 |
| TRT3 | 87.9603627 | 4 | 0.9181 | 0.6785 | 0.4919 |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIABLE EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 57 MSE= 21.6471
Critical Value of Studentized Range= 3.743

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous | | |
|---------------------|------------------------|--------------------------|------------------------|
| | Lower Confidence Limit | Difference Between Means | Upper Confidence Limit |
| TRT3 - CONTROL | -4.321 | 0.175 | 4.671 |
| TRT3 - TRT1 | -3.788 | 0.708 | 5.204 |
| TRT3 - TRT2 | -3.268 | 1.157 | 5.582 |
| CONTROL - TRT3 | -4.671 | -0.175 | 4.321 |
| CONTROL - TRT1 | -3.964 | 0.532 | 5.029 |
| CONTROL - TRT2 | -3.444 | 0.981 | 5.407 |
| TRT1 - TRT3 | -5.204 | -0.708 | 3.788 |
| TRT1 - CONTROL | -5.029 | -0.532 | 3.964 |
| TRT1 - TRT2 | -3.976 | 0.449 | 4.874 |
| TRT2 - TRT3 | -5.582 | -1.157 | 3.268 |
| TRT2 - CONTROL | -5.407 | -0.981 | 3.444 |
| TRT2 - TRT1 | -4.874 | -0.449 | 3.976 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIABLE EMBRYOS

10:48 Wednesday, June 24, 1998

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General Linear Models Procedure

Dunnett's One-tailed T tests for variable: RESPONSE

NOTE: This test controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 57 MSE= 21.6471
Critical Value of Dunnett's T= 2.105

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | | Simultaneous Upper Confidence Limit | |
|---------------------|--|--------|--|--|
| | Difference Between Means | | | |
| TRT3 - CONTROL | -3.401 | 0.175 | 3.751 | |
| TRT1 - CONTROL | -4.108 | -0.532 | 3.044 | |
| TRT2 - CONTROL | -4.501 | -0.981 | 2.538 | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Class Level Information

| Class | Levels | Values |
|-------|--------|------------------------|
| LEVEL | 4 | CONTROL TRT1 TRT2 TRT3 |

Number of observations in data set = 64

NOTE: Due to missing values, only 61 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

Effect Coefficients

INTERCEPT 0

| LEVEL | CONTROL | L2 |
|-------|-----------|----|
| TRT1 | L3 | |
| TRT2 | L4 | |
| TRT3 | -L2-L3-L4 | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: RESPONSE

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|--------|----|-------------------|----------------|---------|--------|
| | | | | | |

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Model 3 636.55098 212.18366 1.66 0.1869

Error 57 7306.88225 128.19092

Corrected Total 60 7943.43323

R-Square C.V. Root MSE RESPONSE Mean

0.080135 17.83863 11.322 63.470

Source DF Type I SS Mean Square F Value Pr > F

LEVEL 3 636.55098 212.18366 1.66 0.1869

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Least Squares Means

| LEVEL | RESPONSE LSMEAN | Pr > T i/j | H0: LSMEAN(i)=LSMEAN(j) | 1 | 2 | 3 | 4 |
|---------|--------------------|-----------------|-------------------------|--------|--------|---|---|
| CONTROL | 62.4708408 | 1 | 0.5858 | 0.9812 | 0.1254 | | |
| TRT1 | 60.2052516 | 2 | 0.5858 | 0.5960 | 0.0399 | | |
| TRT2 | 62.3746508 | 3 | 0.9812 | 0.5960 | 0.1143 | | |
| TRT3 | 68.9013953 | 4 | 0.1254 | 0.0399 | 0.1143 | | |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 57 MSE= 128.1909
Critical Value of Studentized Range= 3.743

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | | Simultaneous Upper Confidence Limit | |
|---------------------|--|--------|--|--|
| | Difference Between Means | | | |
| TRT3 - CONTROL | -4.511 | 6.431 | 17.372 | |
| TRT3 - TRT2 | -4.242 | 6.527 | 17.296 | |
| TRT3 - TRT1 | -2.245 | 8.696 | 19.637 | |
| CONTROL - TRT3 | -17.372 | -6.431 | 4.511 | |
| CONTROL - TRT2 | -10.673 | 0.096 | 10.865 | |
| CONTROL - TRT1 | -8.676 | 2.266 | 13.207 | |
| TRT2 - TRT3 | -17.296 | -6.527 | 4.242 | |
| TRT2 - CONTROL | -10.865 | -0.096 | 10.673 | |

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| | | | | |
|------|-----------|---------|--------|--------|
| TRT2 | - TRT1 | -8.600 | 2.169 | 12.938 |
| TRT1 | - TRT3 | -19.637 | -8.696 | 2.245 |
| TRT1 | - CONTROL | -13.207 | -2.266 | 8.676 |
| TRT1 | - TRT2 | -12.938 | -2.169 | 8.600 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS*****
10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 57 MSE= 128.1909
Critical Value of Dunnett's T= 2.105

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | | Simultaneous Upper Confidence Limit | |
|---------------------|--|--------|--|--|
| | Difference Between Means | | | |
| TRT3 - CONTROL | -2.271 | 6.431 | 15.133 | |
| TRT2 - CONTROL | -8.661 | -0.096 | 8.469 | |
| TRT1 - CONTROL | -10.968 | -2.266 | 6.436 | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID*****
10:48 Wednesday, June 24, 1998General Linear Models Procedure
Class Level Information

| Class | Levels | Values |
|-------|--------|------------------------|
| LEVEL | 4 | CONTROL TRT1 TRT2 TRT3 |

Number of observations in data set = 64

NOTE: Due to missing values, only 63 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID*****
10:48 Wednesday, June 24, 1998General Linear Models Procedure
Type I Estimable Functions for: LEVEL

Effect Coefficients

| | |
|-----------|-----------|
| INTERCEPT | 0 |
| LEVEL . | CONTROL |
| TRT1 | L2 |
| TRT2 | L3 |
| TRT3 | L4 |
| | -L2-L3-L4 |

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PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: RESPONSE

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----------|-------------------|----------------|---------------|--------|
| Model | 3 | 542.71839 | 180.90613 | 0.86 | 0.4669 |
| Error | 59 | 12409.61658 | 210.33248 | | |
| Corrected Total | 62 | 12952.33497 | | | |
| | R-Square | C.V. | Root MSE | RESPONSE Mean | |
| | 0.041901 | 29.03951 | 14.503 | 49.942 | |

| Source | DF | Type I SS | Mean Square | F Value | Pr > F |
|--------|----|-----------|-------------|---------|--------|
| LEVEL | 3 | 542.71839 | 180.90613 | 0.86 | 0.4669 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Least Squares Means

| LEVEL | RESPONSE LSMEAN | Pr > T i/j | H0: LSMEAN(i)=LSMEAN(j) 1 2 3 4 |
|---------|--------------------|-----------------|------------------------------------|
| CONTROL | 49.2890079 | 1 | 0.8385 0.7276 0.2723 |
| TRT1 | 48.2392297 | 2 | 0.8385 0.8850 0.1954 |
| TRT2 | 47.4942417 | 3 | 0.7276 0.8850 0.1517 |
| TRT3 | 55.0647653 | 4 | 0.2723 0.1954 0.1517 |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 210.3325
Critical Value of Studentized Range= 3.739

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | Difference Between Means | Simultaneous Upper Confidence Limit |
|---------------------|--|--------------------------------|--|
| LEVEL . | CONTROL | L2 | |
| TRT1 | L3 | | |
| TRT2 | L4 | | |
| TRT3 | -L2-L3-L4 | | |

| | | | | |
|---------|-----------|---------|--------|--------|
| TRT3 | - CONTROL | -8.004 | 5.776 | 19.556 |
| TRT3 | - TRT1 | -6.955 | 6.826 | 20.606 |
| TRT3 | - TRT2 | -6.210 | 7.571 | 21.351 |
| CONTROL | - TRT3 | -19.556 | -5.776 | 8.004 |
| CONTROL | - TRT1 | -12.506 | 1.050 | 14.606 |
| CONTROL | - TRT2 | -11.761 | 1.795 | 15.351 |
| TRT1 | - TRT3 | -20.606 | -6.826 | 6.955 |
| TRT1 | - CONTROL | -14.606 | -1.050 | 12.506 |
| TRT1 | - TRT2 | -12.811 | 0.745 | 14.301 |
| TRT2 | - TRT3 | -21.351 | -7.571 | 6.210 |
| TRT2 | - CONTROL | -15.351 | -1.795 | 11.761 |
| TRT2 | - TRT1 | -14.301 | -0.745 | 12.811 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 210.3325
Critical Value of Dunnett's T= 2.106

Comparisons significant at the 0.05 level are indicated by '***'.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | | Simultaneous Upper Confidence Limit | |
|---------------------|--|--------|--|--|
| | Difference Between Means | | | |
| TRT3 - CONTROL | -5.201 | 5.776 | 16.753 | |
| TRT1 - CONTROL | -11.848 | -1.050 | 9.749 | |
| TRT2 - CONTROL | -12.593 | -1.795 | 9.004 | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Class Level Information

| Class | Levels | Values |
|-------|--------|------------------------|
| LEVEL | 4 | CONTROL TRT1 TRT2 TRT3 |

Number of observations in data set = 64

NOTE: Due to missing values, only 61 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

10:48 Wednesday, June 24, 1998

| Effect | Coefficients | | |
|-----------|--------------|-----------|--|
| INTERCEPT | 0 | | |
| LEVEL | CONTROL | L2 | |
| | TRT1 | L3 | |
| | TRT2 | L4 | |
| | TRT3 | -L2-L3-L4 | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: RESPONSE

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----------|-------------------|----------------|---------------|--------|
| Model | 3 | 103.88035 | 34.62678 | 0.16 | 0.9230 |
| Error | 57 | 12358.18974 | 216.81035 | | |
| Corrected Total | 60 | 12462.07009 | | | |
| | R-Square | C.V. | Root MSE | RESPONSE Mean | |
| | 0.008336 | 21.12861 | 14.724 | 69.690 | |

| Source | DF | Type I SS | Mean Square | F Value | Pr > F |
|--------|----|-----------|-------------|---------|--------|
| LEVEL | 3 | 103.88035 | 34.62678 | 0.16 | 0.9230 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Least Squares Means

| LEVEL | RESPONSE | | | Pr > T | |
|---------|------------|-----|-------------------------|---------|--------|
| | LSMEAN | i/j | HO: LSMEAN(i)=LSMEAN(j) | | |
| | | | 1 | 2 | 3 |
| CONTROL | 68.9043635 | 1 | 0.6043 | 0.8482 | 0.8979 |
| TRT1 | 71.7059987 | 2 | 0.6043 | 0.7373 | 0.5183 |
| TRT2 | 69.9219272 | 3 | 0.8482 | 0.7373 | 0.7477 |
| TRT3 | 68.2113163 | 4 | 0.8979 | 0.5183 | 0.7477 |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 57 MSE= 216.8103
Critical Value of Studentized Range= 3.743

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | | Difference Between Means | Simultaneous Upper Confidence Limit | |
|---------------------|--|--------|--------------------------------|--|--|
| | | | | | |
| TRT1 - TRT2 | -12.221 | 1.784 | 15.789 | | |
| TRT1 - CONTROL | -11.427 | 2.802 | 17.031 | | |
| TRT1 - TRT3 | -10.734 | 3.495 | 17.724 | | |
| TRT2 - TRT1 | -15.789 | -1.784 | 12.221 | | |
| TRT2 - CONTROL | -12.987 | 1.018 | 15.023 | | |
| TRT2 - TRT3 | -12.294 | 1.711 | 15.716 | | |
| CONTROL - TRT1 | -17.031 | -2.802 | 11.427 | | |
| CONTROL - TRT2 | -15.023 | -1.018 | 12.987 | | |
| CONTROL - TRT3 | -13.536 | 0.693 | 14.922 | | |
| TRT3 - TRT1 | -17.724 | -3.495 | 10.734 | | |
| TRT3 - TRT2 | -15.716 | -1.711 | 12.294 | | |
| TRT3 - CONTROL | -14.922 | -0.693 | 13.536 | | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: RESPONSE

NOTE: This test controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 57 MSE= 216.8103
Critical Value of Dunnett's T= 2.105

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | | Difference Between Means | Simultaneous Upper Confidence Limit | |
|---------------------|--|--------|--------------------------------|--|--|
| | | | | | |
| TRT1 - CONTROL | -8.515 | 2.802 | 14.119 | | |
| TRT2 - CONTROL | -10.121 | 1.018 | 12.156 | | |
| TRT3 - CONTROL | -12.010 | -0.693 | 10.624 | | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Class Level Information

| Class | Levels | Values |
|-------|--------|------------------------|
| LEVEL | 4 | CONTROL TRT1 TRT2 TRT3 |

NOTE: Due to missing values, only 63 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

| Effect | Coefficients |
|-----------|----------------|
| INTERCEPT | 0 |
| LEVEL | CONTROL L2 |
| | TRT1 L3 |
| | TRT2 L4 |
| | TRT3 -L2-L3-L4 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: RESPONSE

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----------|-------------------|----------------|---------------|--------|
| Model | 3 | 6.9325968 | 2.3108656 | 0.05 | 0.9845 |
| Error | 59 | 2661.445970 | 45.1092537 | | |
| Corrected Total | 62 | 2668.378567 | | | |
| | R-Square | C.V. | Root MSE | RESPONSE Mean | |
| | 0.002598 | 8.075934 | 6.7163 | 83.165 | |

| Source | DF | Type I SS | Mean Square | F Value | Pr > F |
|--------|----|-----------|-------------|---------|--------|
| LEVEL | 3 | 6.9325968 | 2.3108656 | 0.05 | 0.9845 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Least Squares Means

| LEVEL | RESPONSE LSMEAN | Pr > T i/j | H0: LSMEAN(i)=LSMEAN(j) | | | |
|---------|--------------------|-----------------|-------------------------|--------|--------|---|
| | i | j | 1 | 2 | 3 | 4 |
| CONTROL | 82.9786034 | 1 | 0.7601 | 0.9548 | 0.9507 | |
| TRT1 | 83.7070301 | 2 | 0.7601 | 0.7174 | 0.8114 | |
| TRT2 | 82.8433040 | 3 | 0.9548 | 0.7174 | 0.9064 | |
| TRT3 | 83.1283574 | 4 | 0.9507 | 0.8114 | 0.9064 | |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 45.10925
 Critical Value of Studentized Range= 3.739

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | | Simultaneous Lower Confidence Limit | Difference Between Means | Simultaneous Upper Confidence Limit |
|---------------------|-----------|--|--------------------------------|--|
| TRT1 | - TRT3 | -5.8030 | 0.5787 | 6.9604 |
| TRT1 | - CONTROL | -5.5495 | 0.7284 | 7.0063 |
| TRT1 | - TRT2 | -5.4142 | 0.8637 | 7.1416 |
| TRT3 | - TRT1 | -6.9604 | -0.5787 | 5.8030 |
| TRT3 | - CONTROL | -6.2319 | 0.1498 | 6.5314 |
| TRT3 | - TRT2 | -6.0966 | 0.2851 | 6.6667 |
| CONTROL | - TRT1 | -7.0063 | -0.7284 | 5.5495 |
| CONTROL | - TRT3 | -6.5314 | -0.1498 | 6.2319 |
| CONTROL | - TRT2 | -6.1426 | 0.1353 | 6.4132 |
| TRT2 | - TRT1 | -7.1416 | -0.8637 | 5.4142 |
| TRT2 | - TRT3 | -6.6667 | -0.2851 | 6.0966 |
| TRT2 | - CONTROL | -6.4132 | -0.1353 | 6.1426 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: RESPONSE

NOTE: This test controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 45.10925
 Critical Value of Dunnett's T= 2.106

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | | Simultaneous Lower Confidence Limit | Difference Between Means | Simultaneous Upper Confidence Limit |
|---------------------|-----------|--|--------------------------------|--|
| TRT1 | - CONTROL | -4.2723 | 0.7284 | 5.7292 |
| TRT3 | - CONTROL | -4.9337 | 0.1498 | 5.2332 |
| TRT2 | - CONTROL | -5.1361 | -0.1353 | 4.8655 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Class Level InformationClass Levels Values
 LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 63 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Type I Estimable Functions for: LEVELEffect Coefficients
 INTERCEPT 0
 LEVEL CONTROL L2
 TRT1 L3
 TRT2 L4
 TRT3 -L2-L3-L4

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: RESPONSE

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----------|-------------------|----------------|---------------|--------|
| Model | 3 | 650.69989 | 216.89996 | 0.84 | 0.4783 |
| Error | 59 | 15264.37102 | 258.71815 | | |
| Corrected Total | 62 | 15915.07091 | | | |
| | R-Square | C.V. | Root MSE | RESPONSE Mean | |
| | 0.040886 | 29.91547 | 16.085 | 53.767 | |

Source DF Type I SS Mean Square F Value Pr > F
 LEVEL 3 650.69989 216.89996 0.84 0.4783

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Least Squares Means

| LEVEL | RESPONSE LSMEAN | Pr > T | H0: LSMEAN(i)=LSMEAN(j) | | | | |
|---------|--------------------|---------|-------------------------|--------|--------|---|---|
| | | | i/j | 1 | 2 | 3 | 4 |
| CONTROL | 53.5420576 | 1 | 0.6822 | 0.7072 | 0.3256 | | |
| TRT1 | 51.2022297 | 2 | 0.6822 | 0.9729 | 0.1679 | | |
| TRT2 | 51.3959610 | 3 | 0.7072 | 0.9729 | 0.1782 | | |
| TRT3 | 59.2727082 | 4 | 0.3256 | 0.1679 | 0.1782 | | |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 258.7182
Critical Value of Studentized Range= 3.739

Comparisons significant at the 0.05 level are indicated by '***'.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | | Simultaneous Difference Between Means | | Upper Confidence Limit | |
|---------------------|--|--------|--|--------|------------------------------|--------|
| | TRT3 - CONTROL | -9.553 | TRT3 - TRT2 | -7.407 | TRT3 - TRT1 | -7.213 |
| CONTROL - TRT3 | -21.014 | -5.731 | 9.553 | | | |
| CONTROL - TRT2 | -12.889 | 2.146 | 17.181 | | | |
| CONTROL - TRT1 | -12.695 | 2.340 | 17.375 | | | |
| TRT2 - TRT3 | -23.160 | -7.877 | 7.407 | | | |
| TRT2 - CONTROL | -17.181 | -2.146 | 12.889 | | | |
| TRT2 - TRT1 | -14.841 | 0.194 | 15.228 | | | |
| TRT1 - TRT3 | -23.354 | -8.070 | 7.213 | | | |
| TRT1 - CONTROL | -17.375 | -2.340 | 12.695 | | | |
| TRT1 - TRT2 | -15.228 | -0.194 | 14.841 | | | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: RESPONSE

NOTE: This test controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 258.7182
Critical Value of Dunnett's T= 2.106

Comparisons significant at the 0.05 level are indicated by '***'.

Simultaneous Simultaneous

| LEVEL Comparison | Lower Confidence Limit | Difference Between Means | Upper Confidence Limit |
|---------------------|------------------------------|--------------------------------|------------------------------|
| TRT3 - CONTROL | -6.443 | 5.731 | 17.905 |
| TRT2 - CONTROL | -14.122 | -2.146 | 9.830 |
| TRT1 - CONTROL | -14.316 | -2.340 | 9.636 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Class Level Information

| Class | Levels | Values |
|-------|--------|------------------------|
| LEVEL | 4 | CONTROL TRT1 TRT2 TRT3 |

Number of observations in data set = 64

NOTE: Due to missing values, only 63 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

| Effect | Coefficients |
|--------|--------------|
|--------|--------------|

| | |
|-----------|---|
| INTERCEPT | 0 |
|-----------|---|

| | | |
|-------|---------|-----------|
| LEVEL | CONTROL | L2 |
| | TRT1 | L3 |
| | TRT2 | L4 |
| | TRT3 | -L2-L3-L4 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: RESPONSE

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----------|-------------------|----------------|---------------|--------|
| Model | 3 | 457.81380 | 152.60460 | 0.54 | 0.6583 |
| Error | 59 | 16743.73564 | 283.79213 | | |
| Corrected Total | 62 | 17201.54944 | | | |
| | R-Square | C.V. | Root MSE | RESPONSE Mean | |
| | 0.026615 | 35.32609 | 16.846 | 47.687 | |

| Source | DF | Type I SS | Mean Square | F Value | Pr > F |
|--------|----|-----------|-------------|---------|--------|
|--------|----|-----------|-------------|---------|--------|

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LEVEL 3 457.81380 152.60460 0.54 0.6583

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Least Squares Means

| LEVEL | RESPONSE | Pr > T | H0: LSMEAN(i)=LSMEAN(j) | | | | |
|---------|------------|---------|-------------------------|--------|--------|---|---|
| | | | LSMEAN i/j | 1 | 2 | 3 | 4 |
| CONTROL | 47.6959554 | 1 | 0.9482 | 0.5564 | 0.4970 | | |
| TRT1 | 47.3070534 | 2 | 0.9482 | 0.6007 | 0.4577 | | |
| TRT2 | 44.1726703 | 3 | 0.5564 | 0.6007 | 0.2107 | | |
| TRT3 | 51.8334408 | 4 | 0.4970 | 0.4577 | 0.2107 | | |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 283.7921
Critical Value of Studentized Range= 3.739

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | | Simultaneous Difference Between Means | | Simultaneous Upper Confidence Limit | |
|------------------|-------------------------------------|---------|---------------------------------------|---------|-------------------------------------|--------|
| | TRT3 - CONTROL | -11.869 | TRT3 - TRT1 | -11.480 | TRT3 - TRT2 | -8.346 |
| CONTROL - TRT3 | -20.144 | -4.137 | 11.869 | | | |
| CONTROL - TRT1 | -15.358 | 0.389 | 16.135 | | | |
| CONTROL - TRT2 | -12.223 | 3.523 | 19.270 | | | |
| TRT1 - TRT3 | -20.533 | -4.526 | 11.480 | | | |
| TRT1 - CONTROL | -16.135 | -0.389 | 15.358 | | | |
| TRT1 - TRT2 | -12.612 | 3.134 | 18.881 | | | |
| TRT2 - TRT3 | -23.668 | -7.661 | 8.346 | | | |
| TRT2 - CONTROL | -19.270 | -3.523 | 12.223 | | | |
| TRT2 - TRT1 | -18.881 | -3.134 | 12.612 | | | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

File:44457727.sas Page 40
Dunnett's One-tailed T tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 283.7921
Critical Value of Dunnett's T= 2.106

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | | Simultaneous Difference Between Means | | Simultaneous Upper Confidence Limit | |
|------------------|-------------------------------------|--------|---------------------------------------|---------|-------------------------------------|---------|
| | TRT3 - CONTROL | -8.613 | TRT1 - CONTROL | -12.932 | TRT2 - CONTROL | -16.066 |
| TRT3 - CONTROL | -8.613 | 4.137 | 16.888 | | | |
| TRT1 - CONTROL | -12.932 | -0.389 | 12.154 | | | |
| TRT2 - CONTROL | -16.066 | -3.523 | 9.020 | | | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
17. ANALYSIS OF EGGSHELL THICKNESS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Class Level Information

| Class | Levels | Values |
|-------|--------|------------------------|
| LEVEL | 4 | CONTROL TRT1 TRT2 TRT3 |

Number of observations in data set = 64

NOTE: Due to missing values, only 58 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
17. ANALYSIS OF EGGSHELL THICKNESS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

| Effect | Coefficients |
|-----------|----------------|
| INTERCEPT | 0 |
| LEVEL | CONTROL L2 |
| | TRT1 L3 |
| | TRT2 L4 |
| | TRT3 -L2-L3-L4 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
17. ANALYSIS OF EGGSHELL THICKNESS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: THICK

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|--------|----|----------------|-------------|---------|--------|
| Model | 3 | 0.0006093 | 0.0002031 | 2.06 | 0.1168 |

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Error

Corrected Total 57 0.0059423

| R-Square | C.V. | Root MSE | THICK Mean |
|----------|----------|----------|------------|
| 0.102532 | 4.980076 | 0.0099 | 0.1996 |

| Source | DF | Type I SS | Mean Square | F Value | Pr > F |
|--------|----|-----------|-------------|---------|--------|
| LEVEL | 3 | 0.0006093 | 0.0002031 | 2.06 | 0.1168 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
17. ANALYSIS OF EGGSHELL THICKNESS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Least Squares Means

| LEVEL | THICK LSMEAN | Pr > T i/j | HO: LSMEAN(i)=LSMEAN(j) | | |
|---------|-----------------|-----------------|-------------------------|--------|--------|
| | | | 1 | 2 | 3 |
| CONTROL | 0.19584615 | 1 | 0.2293 | 0.0311 | 0.7471 |
| TRT1 | 0.20050000 | 2 | 0.2293 | 0.3317 | 0.3567 |
| TRT2 | 0.20406250 | 3 | 0.0311 | 0.3317 | 0.0553 |
| TRT3 | 0.19706667 | 4 | 0.7471 | 0.3567 | 0.0553 |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
17. ANALYSIS OF EGGSHELL THICKNESS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: THICK

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 54 MSE= 0.000099
Critical Value of Studentized Range= 3.749

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | | Simultaneous Difference Between Means | | Simultaneous Upper Confidence Limit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|--|-----------|--|-------------|--|-----------|-------------|----------------|-------------|-----------|----------------|-------------|-------------|-----------|-------------|-------------|----------------|-----------|----------------|----------------|----------------|----------|----------------|-------------|-------------------|-----------|----------|-------------|-----------|-----------|----------|----------------|-----------|----------|----------|----------------|-----------|-----------|----------|
| | TRT2 - TRT1 | -0.006078 | TRT2 - TRT3 | -0.002472 | TRT2 - CONTROL | -0.001620 | TRT1 - TRT2 | -0.013203 | TRT1 - TRT3 | -0.006356 | TRT1 - CONTROL | -0.005493 | TRT3 - TRT2 | -0.016464 | TRT3 - TRT1 | -0.013223 | TRT3 - CONTROL | -0.008762 | CONTROL - TRT2 | -0.018053 | CONTROL - TRT1 | -0.01203 | CONTROL - TRT3 | -0.008216 | CONTROL - CONTROL | 0.001620 | | | | | | | | | | | | | |
| TRT2 - TRT1 | -0.006078 | 0.003562 | 0.013203 | TRT2 - TRT3 | -0.002472 | 0.006996 | 0.016464 | TRT2 - CONTROL | -0.001620 | 0.008216 | 0.018053 | TRT1 - TRT2 | -0.013203 | -0.003562 | 0.006078 | TRT1 - TRT3 | -0.006356 | 0.003433 | 0.013223 | TRT1 - CONTROL | -0.005493 | 0.004654 | 0.014800 | TRT3 - TRT2 | -0.016464 | -0.006996 | 0.002472 | TRT3 - TRT1 | -0.013223 | -0.003433 | 0.006356 | TRT3 - CONTROL | -0.008762 | 0.001221 | 0.011203 | CONTROL - TRT2 | -0.018053 | -0.008216 | 0.001620 |

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CONTROL - TRT1 -0.014800 -0.004654 0.005493
CONTROL - TRT3 -0.011203 -0.001221 0.008762

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
17. ANALYSIS OF EGGSHELL THICKNESS

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: THICK

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 54 MSE= 0.000099
Critical Value of Dunnett's T= 2.100

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | | Difference Between Means | | Simultaneous Upper Confidence Limit | | | | | | | | | | | | |
|---------------------|--|----------|--------------------------------|-----------|--|-----------|----------------|----------|----------------|----------|----------------|----------|----------------|----------|----------------|----------|----------------|
| | TRT2 - CONTROL | 0.000425 | TRT1 - CONTROL | -0.003383 | TRT3 - CONTROL | -0.006686 | TRT2 - CONTROL | 0.008216 | TRT1 - CONTROL | 0.004654 | TRT3 - CONTROL | 0.001221 | TRT2 - CONTROL | 0.016007 | TRT1 - CONTROL | 0.012690 | TRT3 - CONTROL |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
18. ANALYSIS OF HATCHLING WEIGHT

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Class Level Information

| Class | Levels | Values |
|-------|--------|------------------------|
| LEVEL | 4 | CONTROL TRT1 TRT2 TRT3 |

Number of observations in data set = 64

NOTE: Due to missing values, only 61 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
18. ANALYSIS OF HATCHLING WEIGHT

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

| Effect | Coefficients | | |
|-----------|--------------|-----------|--|
| INTERCEPT | 0 | | |
| LEVEL | CONTROL | L2 | |
| | TRT1 | L3 | |
| | TRT2 | L4 | |
| | TRT3 | -L2-L3-L4 | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
18. ANALYSIS OF HATCHLING WEIGHT

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General Linear Models Procedure

Dependent Variable: HATWT

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----------|----------------|-------------|------------|--------|
| Model | 3 | 0.6046116 | 0.2015372 | 1.00 | 0.3989 |
| Error | 57 | 11.4708671 | 0.2012433 | | |
| Corrected Total | 60 | 12.0754787 | | | |
| | R-Square | C.V. | Root MSE | HATWT Mean | |
| | 0.050069 | 6.979186 | 0.4486 | 6.4277 | |

Source DF Type I SS Mean Square F Value Pr > F

LEVEL 3 0.6046116 0.2015372 1.00 0.3989

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
18. ANALYSIS OF HATCHLING WEIGHT

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Least Squares Means

| LEVEL | HATWT LSMEAN | Pr > T i/j | HO: LSMEAN(i)=LSMEAN(j) | | | |
|---------|-----------------|-----------------|-------------------------|--------|--------|---|
| | | | 1 | 2 | 3 | 4 |
| CONTROL | 6.33200000 | 1 | 0.4668 | 0.9146 | 0.1315 | |
| TRT1 | 6.45200000 | 2 | 0.4668 | 0.5270 | 0.4284 | |
| TRT2 | 6.34937500 | 3 | 0.9146 | 0.5270 | 0.1534 | |
| TRT3 | 6.58266667 | 4 | 0.1315 | 0.4284 | 0.1534 | |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
18. ANALYSIS OF HATCHLING WEIGHT

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: HATWT

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 57 MSE= 0.201243
Critical Value of Studentized Range= 3.743

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | | Simultaneous Difference Between Means | | Simultaneous Upper Confidence Limit | |
|---------------------|--|---------|--|--------|--|--------|
| | TRT3 - TRT1 | -0.3028 | TRT3 - TRT2 | 0.1307 | TRT1 - TRT2 | 0.5642 |
| TRT3 - TRT2 | -0.1934 | 0.2333 | 0.6600 | 0.6842 | -0.1828 | 0.6842 |

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| | | | |
|----------------|---------|---------|--------|
| TRT3 - CONTROL | -0.1828 | 0.2507 | 0.6842 |
| TRT1 - TRT3 | -0.5642 | -0.1307 | 0.3028 |
| TRT1 - TRT2 | -0.3241 | 0.1026 | 0.5293 |
| TRT1 - CONTROL | -0.3135 | 0.1200 | 0.5535 |
| TRT2 - TRT3 | -0.6600 | -0.2333 | 0.1934 |
| TRT2 - TRT1 | -0.5293 | -0.1026 | 0.3241 |
| TRT2 - CONTROL | -0.4093 | 0.0174 | 0.4441 |
| CONTROL - TRT3 | -0.6842 | -0.2507 | 0.1828 |
| CONTROL - TRT1 | -0.5535 | -0.1200 | 0.3135 |
| CONTROL - TRT2 | -0.4441 | -0.0174 | 0.4093 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
18. ANALYSIS OF HATCHLING WEIGHT

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: HATWT

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 57 MSE= 0.201243
Critical Value of Dunnett's T= 2.105

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | | Simultaneous Difference Between Means | | Simultaneous Upper Confidence Limit | |
|---------------------|--|---------|--|---------|--|---------|
| | TRT3 - CONTROL | -0.0941 | TRT1 - CONTROL | -0.2248 | TRT2 - CONTROL | -0.3220 |
| TRT1 - TRT3 | -0.2248 | 0.1200 | 0.4648 | | | |
| TRT2 - TRT3 | -0.3220 | 0.0174 | 0.3567 | | | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Class Level Information

| Class | Levels | Values |
|-------|--------|------------------------|
| LEVEL | 4 | CONTROL TRT1 TRT2 TRT3 |

Number of observations in data set = 64

NOTE: Due to missing values, only 60 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

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Effect Coefficients

| | |
|-----------|----------------|
| INTERCEPT | 0 |
| LEVEL | CONTROL L2 |
| | TRT1 L3 |
| | TRT2 L4 |
| | TRT3 -L2-L3-L4 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: SURVWT

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----------|----------------|-------------|-------------|--------|
| Model | 3 | 14.926667 | 4.975556 | 0.62 | 0.6074 |
| Error | 56 | 452.157333 | 8.074238 | | |
| Corrected Total | 59 | 467.084000 | | | |
| | R-Square | C.V. | Root MSE | SURVWT Mean | |
| | 0.031957 | 11.56971 | 2.8415 | 24.560 | |

| | | | | | |
|--------|----|-----------|-------------|---------|--------|
| Source | DF | Type I SS | Mean Square | F Value | Pr > F |
| LEVEL | 3 | 14.926667 | 4.975556 | 0.62 | 0.6074 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Least Squares Means

| LEVEL | SURVWT LSMEAN | Pr > T i/j | H0: LSMEAN(i)=LSMEAN(j) | | |
|---------|------------------|-----------------|-------------------------|--------|--------|
| | | | 1 | 2 | 3 |
| CONTROL | 23.973333 | 1 | 0.1889 | 0.6500 | 0.6363 |
| TRT1 | 25.353333 | 2 | 0.1889 | 0.3859 | 0.3964 |
| TRT2 | 24.446667 | 3 | 0.6500 | 0.3859 | 0.9847 |
| TRT3 | 24.466667 | 4 | 0.6363 | 0.3964 | 0.9847 |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: SURVWT

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 56 MSE= 8.074238

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Critical Value of Studentized Range= 3.745
Minimum Significant Difference= 2.7474

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | Difference Between Means | Simultaneous Upper Confidence Limit |
|------------------|-------------------------------------|--------------------------|-------------------------------------|
| TRT1 - TRT3 | -1.861 | 0.887 | 3.634 |
| TRT1 - TRT2 | -1.841 | 0.907 | 3.654 |
| TRT1 - CONTROL | -1.367 | 1.380 | 4.127 |
| TRT3 - TRT1 | -3.634 | -0.887 | 1.861 |
| TRT3 - TRT2 | -2.727 | 0.020 | 2.767 |
| TRT3 - CONTROL | -2.254 | 0.493 | 3.241 |
| TRT2 - TRT1 | -3.654 | -0.907 | 1.841 |
| TRT2 - TRT3 | -2.767 | -0.020 | 2.727 |
| TRT2 - CONTROL | -2.274 | 0.473 | 3.221 |
| CONTROL - TRT1 | -4.127 | -1.380 | 1.367 |
| CONTROL - TRT3 | -3.241 | -0.493 | 2.254 |
| CONTROL - TRT2 | -3.221 | -0.473 | 2.274 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: SURVWT

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 56 MSE= 8.074238
Critical Value of Dunnett's T= 2.107
Minimum Significant Difference= 2.1861

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | Difference Between Means | Simultaneous Upper Confidence Limit |
|------------------|-------------------------------------|--------------------------|-------------------------------------|
| TRT1 - CONTROL | -0.806 | 1.380 | 3.566 |
| TRT3 - CONTROL | -1.693 | 0.493 | 2.679 |
| TRT2 - CONTROL | -1.713 | 0.473 | 2.659 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
20. ANALYSIS OF FOOD CONSUMPTION

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Class Level Information

| Class | Levels | Values |
|-------|--------|------------------------|
| LEVEL | 4 | CONTROL TRT1 TRT2 TRT3 |

Number of observations in data set = 64

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 20. ANALYSIS OF FOOD CONSUMPTION

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

Effect Coefficients

INTERCEPT 0

| | | |
|-------|---------|-----------|
| LEVEL | CONTROL | L2 |
| | TRT1 | L3 |
| | TRT2 | L4 |
| | TRT3 | -L2-L3-L4 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 20. ANALYSIS OF FOOD CONSUMPTION

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: FOOD

| | | | | | |
|--------|----|----------------|-------------|---------|--------|
| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|--------|----|----------------|-------------|---------|--------|

| | | | | | |
|-------|---|-----------|-----------|------|--------|
| Model | 3 | 4.0631250 | 1.3543750 | 0.71 | 0.5524 |
|-------|---|-----------|-----------|------|--------|

| | | | | | |
|-------|----|-------------|-----------|--|--|
| Error | 60 | 115.1662500 | 1.9194375 | | |
|-------|----|-------------|-----------|--|--|

| | | | | | |
|-----------------|----|-------------|--|--|--|
| Corrected Total | 63 | 119.2293750 | | | |
|-----------------|----|-------------|--|--|--|

| | | | |
|----------|----------|----------|-----------|
| R-Square | C.V. | Root MSE | FOOD Mean |
| 0.034078 | 7.007113 | 1.3854 | 19.772 |

| | | | | | |
|--------|----|-----------|-------------|---------|--------|
| Source | DF | Type I SS | Mean Square | F Value | Pr > F |
|--------|----|-----------|-------------|---------|--------|

| | | | | | |
|-------|---|-----------|-----------|------|--------|
| LEVEL | 3 | 4.0631250 | 1.3543750 | 0.71 | 0.5524 |
|-------|---|-----------|-----------|------|--------|

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 20. ANALYSIS OF FOOD CONSUMPTION

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Least Squares Means

| | | | |
|---------|------------|---------|-------------------------|
| LEVEL | FOOD | Pr > T | HO: LSMEAN(i)=LSMEAN(j) |
| | LSMEAN | i/j | 1 2 3 4 |
| CONTROL | 19.3562500 | 1 | 0.1981 0.2302 0.3821 |
| TRT1 | 19.9937500 | 2 | 0.1981 0.9291 0.6752 |
| TRT2 | 19.9500000 | 3 | 0.2302 0.9291 0.7412 |
| TRT3 | 19.7875000 | 4 | 0.3821 0.6752 0.7412 |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 20. ANALYSIS OF FOOD CONSUMPTION

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: FOOD

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 1.919438
 Critical Value of Studentized Range= 3.737
 Minimum Significant Difference= 1.2944

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | Difference Between Means | Simultaneous Upper Confidence Limit |
|------------------|-------------------------------------|--------------------------|-------------------------------------|
| TRT1 - TRT2 | -1.2506 | 0.0437 | 1.3381 |
| TRT1 - TRT3 | -1.0881 | 0.2062 | 1.5006 |
| TRT1 - CONTROL | -0.6569 | 0.6375 | 1.9319 |
| TRT2 - TRT1 | -1.3381 | -0.0437 | 1.2506 |
| TRT2 - TRT3 | -1.1319 | 0.1625 | 1.4569 |
| TRT2 - CONTROL | -0.7006 | 0.5938 | 1.8881 |
| TRT3 - TRT1 | -1.5006 | -0.2062 | 1.0881 |
| TRT3 - TRT2 | -1.4569 | -0.1625 | 1.1319 |
| TRT3 - CONTROL | -0.8631 | 0.4313 | 1.7256 |
| CONTROL - TRT1 | -1.9319 | -0.6375 | 0.6569 |
| CONTROL - TRT2 | -1.8881 | -0.5938 | 0.7006 |
| CONTROL - TRT3 | -1.7256 | -0.4313 | 0.8631 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 20. ANALYSIS OF FOOD CONSUMPTION

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: FOOD

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 1.919438
 Critical Value of Dunnett's t = 2.104
 Minimum Significant Difference= 1.0306

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | Difference Between Means | Simultaneous Upper Confidence Limit |
|------------------|-------------------------------------|--------------------------|-------------------------------------|
| TRT1 - CONTROL | -0.3931 | 0.6375 | 1.6681 |
| TRT2 - CONTROL | -0.4368 | 0.5938 | 1.6243 |
| TRT3 - CONTROL | -0.5993 | 0.4313 | 1.4618 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Class Level Information

| Class | Levels | Values |
|-------|--------|------------------------|
| LEVEL | 4 | CONTROL TRT1 TRT2 TRT3 |

Number of observations in data set = 64

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: POSTM

| | Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----------|-------------|----------------|-------------|---------|--------|
| Model | 4 | 3412.6171 | 853.1543 | 8.14 | 0.0001 | |
| Error | 59 | 6186.5404 | 104.8566 | | | |
| Corrected Total | 63 | 9599.1575 | | | | |
| | R-Square | C.V. | Root MSE | POSTM Mean | | |
| | 0.355512 | 5.051310 | 10.240 | 202.72 | | |
| Source | DF | Type I SS | Mean Square | F Value | Pr > F | |
| LEVEL | 3 | 395.5238 | 131.8413 | 1.26 | 0.2973 | |
| PREM | 1 | 3017.0934 | 3017.0934 | 28.77 | 0.0001 | |
| Source | DF | Type III SS | Mean Square | F Value | Pr > F | |
| LEVEL | 3 | 370.8781 | 123.6260 | 1.18 | 0.3255 | |
| PREM | 1 | 3017.0934 | 3017.0934 | 28.77 | 0.0001 | |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

10:48 Wednesday, June 24, 1998

General Linear Models Procedure
Least Squares Means

| LEVEL | POSTM LSMEAN | Std Err LSMEAN | Pr > T HO:LSMEAN=0 | LSMEAN Number |
|-------|--------------|----------------|----------------------|---------------|
|-------|--------------|----------------|----------------------|---------------|

| | | | | |
|---------|------------|----------|--------|---|
| CONTROL | 203.417688 | 2.566668 | 0.0001 | 1 |
| TRT1 | 205.190809 | 2.565984 | 0.0001 | 2 |
| TRT2 | 203.536708 | 2.560876 | 0.0001 | 3 |
| TRT3 | 198.729795 | 2.561151 | 0.0001 | 4 |

Pr > |T| HO: LSMEAN(i)=LSMEAN(j)

| i/j | 1 | 2 | 3 | 4 |
|-----|--------|--------|--------|---|
| 1 | 0.6278 | 0.9739 | 0.2016 | . |
| 2 | 0.6278 | 0.6502 | 0.0796 | . |
| 3 | 0.9739 | 0.6502 | 0.1897 | . |
| 4 | 0.2016 | 0.0796 | 0.1897 | . |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: POSTM

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 104.8566
Critical Value of Studentized Range= 3.739
Minimum Significant Difference= 9.5715

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | Difference Between Means | Simultaneous Upper Confidence Limit |
|------------------|-------------------------------------|--------------------------|-------------------------------------|
| TRT1 - TRT2 | -6.615 | 2.956 | 12.528 |
| TRT1 - CONTROL | -5.865 | 3.706 | 13.278 |
| TRT1 - TRT3 | -2.584 | 6.988 | 16.559 |
| TRT2 - TRT1 | -12.528 | -2.956 | 6.615 |
| TRT2 - CONTROL | -8.822 | 0.750 | 10.322 |
| TRT2 - TRT3 | -5.540 | 4.031 | 13.603 |
| CONTROL - TRT1 | -13.278 | -3.706 | 5.865 |
| CONTROL - TRT2 | -10.322 | -0.750 | 8.822 |
| CONTROL - TRT3 | -6.290 | 3.281 | 12.853 |
| TRT3 - TRT1 | -16.559 | -6.988 | 2.584 |
| TRT3 - TRT2 | -13.603 | -4.031 | 5.540 |
| TRT3 - CONTROL | -12.853 | -3.281 | 6.290 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: POSTM

NOTE: This test controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 104.8566
Critical Value of Dunnett's T= 2.105
Minimum Significant Difference= 7.6196

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | Difference Between Means | Simultaneous Upper Confidence Limit |
|------------------|-------------------------------------|--------------------------|-------------------------------------|
| TRT1 - CONTROL | -3.913 | 3.706 | 11.326 |
| TRT2 - CONTROL | -6.870 | 0.750 | 8.370 |

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 TRT3 - CONTROL -10.901 -3.281 4.338

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

 10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Class Level Information

| Class | Levels | Values |
|-------|--------|------------------------|
| LEVEL | 4 | CONTROL TRT1 TRT2 TRT3 |

Number of observations in data set = 64

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

 10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: POSTF

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----|----------------|-------------|---------|--------|
| Model | 4 | 4473.1142 | 1118.2785 | 7.74 | 0.0001 |
| Error | 59 | 8528.4233 | 144.5495 | | |
| Corrected Total | 63 | 13001.5375 | | | |

| | R-Square | C.V. | Root MSE | POSTF Mean |
|--|----------|----------|----------|------------|
| | 0.344045 | 5.318827 | 12.023 | 226.04 |

| Source | DF | Type I SS | Mean Square | F Value | Pr > F |
|------------|----|-------------|-------------|---------|--------|
| LEVEL PREF | 3 | 574.0537 | 191.3512 | 1.32 | 0.2752 |
| PREF | 1 | 3899.0604 | 3899.0604 | 26.97 | 0.0001 |
| Source | DF | Type III SS | Mean Square | F Value | Pr > F |
| LEVEL PREF | 3 | 353.8634 | 117.9545 | 0.82 | 0.4902 |
| PREF | 1 | 3899.0604 | 3899.0604 | 26.97 | 0.0001 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

 10:48 Wednesday, June 24, 1998

General Linear Models Procedure
 Least Squares Means

| LEVEL | POSTF LSMEAN | Std Err LSMEAN | Pr > T HO:LSMEAN=0 | LSMEAN Number |
|---------|--------------|----------------|-------------------------|---------------|
| CONTROL | 226.494816 | 3.015356 | 0.0001 | 1 |
| TRT1 | 227.882541 | 3.015806 | 0.0001 | 2 |
| TRT2 | 227.727980 | 3.007480 | 0.0001 | 3 |
| TRT3 | 222.069663 | 3.007676 | 0.0001 | 4 |

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 Pr > |T| HO: LSMEAN(i)=LSMEAN(j)

| i/j | 1 | 2 | 3 | 4 |
|-----|--------|--------|--------|--------|
| 1 | 0.7468 | 0.7735 | 0.3023 | |
| 2 | 0.7468 | . | 0.9711 | 0.1781 |
| 3 | 0.7735 | 0.9711 | . | 0.1888 |
| 4 | 0.3023 | 0.1781 | 0.1888 | . |

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: POSTF

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 144.5495
 Critical Value of Studentized Range= 3.739
 Minimum Significant Difference= 11.238

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous Lower Confidence Limit | Difference Between Means | Simultaneous Upper Confidence Limit |
|------------------|-------------------------------------|--------------------------|-------------------------------------|
| TRT1 - TRT2 | -10.338 | 0.900 | 12.138 |
| TRT1 - CONTROL | -7.319 | 3.919 | 15.157 |
| TRT1 - TRT3 | -3.582 | 7.656 | 18.894 |
| TRT2 - TRT1 | -12.138 | -0.900 | 10.338 |
| TRT2 - CONTROL | -8.219 | 3.019 | 14.257 |
| TRT2 - TRT3 | -4.482 | 6.756 | 17.994 |
| CONTROL - TRT1 | -15.157 | -3.919 | 7.319 |
| CONTROL - TRT2 | -14.257 | -3.019 | 8.219 |
| CONTROL - TRT3 | -7.501 | 3.738 | 14.976 |
| TRT3 - TRT1 | -18.894 | -7.656 | 3.582 |
| TRT3 - TRT2 | -17.994 | -6.756 | 4.482 |
| TRT3 - CONTROL | -14.976 | -3.738 | 7.501 |

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE
 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: POSTF

NOTE: This test controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 144.5495
 Critical Value of Dunnett's T= 2.105
 Minimum Significant Difference= 8.9463

Comparisons significant at the 0.05 level are indicated by ****.

| LEVEL Comparison | Simultaneous | | |
|---------------------|------------------------------|--------------------------------|------------------------------|
| | Lower Confidence Limit | Difference Between Means | Upper Confidence Limit |
| TRT1 - CONTROL | -5.028 | 3.919 | 12.865 |
| TRT2 - CONTROL | -5.928 | 3.019 | 11.965 |
| TRT3 - CONTROL | -12.684 | -3.738 | 5.209 |

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Page _____ is not included in this copy.

Pages 38 through 85 are not included.

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